Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Annual Assessment of the Status of	)	MB Docket No. 03-172
Competition in the Market for the	)	
Delivery of Video Programming	)	

COMMENTS OF THE NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION

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The National Cable & Telecommunications Association ("NCTA"), by its attorneys, hereby submits its comments in the Commission's annual Notice of Inquiry on the status of competition in the market for the delivery of video programming. NCTA is the principal trade association of the cable television industry in the United States. Its members include owners and operators of cable television systems serving more than 90 percent of the nation's cable television customers and more than 200 program networks. NCTA's members also provide high speed access to the Internet and other services.

INTRODUCTION AND SUMMARY

This is the tenth annual inquiry into the status of video competition, and the Commission has appropriately decided to mark the milestone by "taking a broader view" than in previous years. Specifically, the Commission intends not only to examine developments in the past year but also to report on changes that have occurred in the video marketplace since the first report in 1994.

Taking a long view of competitive trends is an appropriate development. For the last several years, NCTA has filed comments in these inquiries pointing out that a clear trend was emerging from the annual statistics and developments. With respect to competition in the video

marketplace, there have been no back and forth, no fits and starts. From the outset, competition – especially, competition from DBS, which made its debut just before the Commission's first annual report in 1994 – exhibited a steadily accelerating growth curve. Every year, the numbers showed the same thing: Consumers increasingly had a choice of multichannel video programming providers, and the percentage of MVPD subscribers who purchased their service from someone other than their local cable operator continued to increase.

Meanwhile, as NCTA demonstrated, the perceived barriers to full-fledged competition from DBS continued to fall. DBS companies shifted their marketing focus away from rural areas and began directly targeting urban and suburban areas served by cable operators. Large upfront equipment costs, which once made DBS appear to be a high-end service rather than a generally available substitute for cable, disappeared. And the inability of DBS to offer local broadcast signals was remedied by the Satellite Home Viewer Improvement Act of 1999.

A decade ago, cable television operators served almost 100% of the nation's MVPD subscribers. This is not to say that, even then, cable operators had the ability to exercise market power. While there may not have been a choice among MVPDs, consumers had (as they do today) a choice of entertainment services other than MVPD services – including, but not limited to, video entertainment services, such as broadcast television and video rentals – that made demand for cable sufficiently elastic so as to constrain any such market power. But today, consumers have the additional choice of at least two national DBS providers, and, as a result, cable operators now serve fewer than 75% of all MVPD subscribers.

Each year, the Commission has correctly reported that cable still serves the large majority of MVPD subscribers. But, as NCTA has pointed out, this statistical snapshot indicates nothing about the state of competition in the video marketplace. DirecTV and EchoStar are available to

virtually the entire nation; they can and do add subscribers anywhere with virtually no extra costs. In these circumstances, where almost every cable subscriber has the opportunity to switch to at least two available substitutes, a relatively high market share is not indicative of market power.

Independent financial analysts recognize that this is the case and that cable today faces strong marketplace competition. Taking a broader, ten-year view should enable the Commission, as well, to conclude that competition has fully arrived in the video marketplace. The evidence can be found not only in the ubiquitous availability of substitutable choices for consumers but also in the conduct of cable operators and their competitors.

When DBS began to offer consumers an alternative with more channels, more pay-per-view movies, and digital audio and video, cable operators embarked on a multi-billion dollar nationwide upgrade of their facilities. With additional capacity and digital capability, cable operators now provide their own digital tiers of programming, along with a multiplicity of pay-per-view offerings. In the last year, cable has also matched DBS, both by offering an ever-increasing array of high definition television programming and by offering new set-top boxes that include digital video recorders.

Cable operators have also challenged DBS with unique offerings. For example, cable systems are increasingly deploying "Video on Demand" services, using interactive capabilities. They have also made high-speed Internet access service available to more than 80% of the nation's households. And they are offering telephone service in more and more communities.

The bundled availability of video, data and voice services from cable operators has prompted a competitive response from other video, data and voice providers. Most notably in the past year, telephone companies (which provide voice and Internet service, but have not made

the investment to offer video programming service) and the DBS companies (which offer largely video programming) have joined forces to offer discounted packages of video, voice and data.

This is the way a competitive marketplace works. Multiple providers of services vie with each other for customers, each trying to differentiate themselves with unique new services while trying to match the new offerings of their competitors. And, as a result, the array of services now available to consumers – not only video programming services, but non-video services, as well – exceeds what was even imaginable when the Commission embarked on the first of these annual inquiries.

Each year, despite the obvious presence and growth of competition in the video marketplace, the Commission has noted the seemingly anomalous fact that the prices of cable's most widely purchased video programming packages have also increased by more than the rate of inflation. To a great extent, this simply reflects the fact that the recurring costs incurred by cable operators (and, in many cases, DBS operators and other video competitors) have increased faster than inflation. It also reflects the fact that cable operators have continually increased the choice of programming available to basic subscribers. For example, many cable program networks incur greater than inflationary price increases for the programming that they produce and acquire from sports leagues or syndicators, and this results in higher costs to cable operators and consumers. In addition, Bureau of Labor Statistics figures have shown that labor costs increase more rapidly in the communications sector than in other industries.

But it's also the case that cable's costs and prices have increased because the quality of the video programming service offered to consumers has increased. And the point is not simply that the number of channels of programming has increased, although that increase does mean that more niche audiences are being served. It's that the attractiveness of the programming has

also increased as cable operators have sought to win and retain customers – and program networks have sought to ensure carriage and maximize viewership – by enhancing the value of their product. This is evident from the fact that ratings for cable programming have been steadily and sharply increasing to the point where cable networks now enjoy greater viewership than broadcast networks in prime time.

Indeed, as economist Steven S. Wildman, James H. Quello Professor of Telecommunications Studies at Michigan State University, shows, in a study submitted with these comments, there is a valid way of measuring prices of cable service over time, beyond a rote resort to general inflation, by taking into account changes in the quality or value of the service. It is done by focusing on the amount that subscribers, on average, pay per hour spent using basic cable services – *i.e.*, watching cable channels. And, in fact, it turns out that the real, inflation-adjusted price per hour of viewing has steadily and sharply decreased – by more than 15% – in the last six years. This, as Professor Wildman shows, "is compelling evidence that the value proposition offered cable television subscribers has been steadily improving over time" – which is exactly what one would expect in a vibrantly competitive video marketplace.

The quality of cable programming has so markedly increased over the last ten years not only because cable operators have invested to enhance the value of their product but also because of intense competition among cable program networks for viewers and for scarce available capacity on cable systems. A decade ago, more than half of the cable networks available to viewers were owned by a cable operator, and the number of available channels on systems was smaller. Today, only one in five program networks are vertically integrated with operators, so even if one were to assume that vertically-integrated cable program networks have any advantage over non-vertically integrated networks in terms of carriage, the vast majority of

channels are up for grabs among networks in which the operator has no ownership interest. Indeed, cable programming networks are increasingly owned by major broadcast station owners.

The result of all this has been a highly competitive programming marketplace, which has greatly expanded not only the quality but also the diversity of programming available to cable customers. Moreover, while competition among national cable program networks – even networks targeting narrow interests – naturally tends to produce programming aimed at viewers nationwide, cable's efforts to compete with DBS and local broadcasters have also made a wide array of locally originated programming available to cable subscribers. With all-news channels, state public affairs networks, local origination channels, regional sports channels, public, educational and governmental access channels, and even advertising that is directed at smaller local communities within the metropolitan areas served by broadcast stations, cable is a leading source of local programming.

When the Commission considers how the video marketplace has changed since it began preparing its annual reports almost a decade ago, the only reasonable conclusion that can be drawn is that the growth of competition – and the positive effects of that competition – have been remarkable. Consumers nationwide not only have a choice among providers of multichannel video programming, but the quality and array of video – and non-video – services available from those providers has expanded enormously. New competitors continue to grow and add customers every year, but competition in the marketplace is already vibrant. *In six words, it is time for the Commission to declare:* ***The video marketplace is fully competitive.***

I. TEN YEARS AFTER THE FIRST VIDEO COMPETITION REPORT, IT IS ABUNDANTLY CLEAR THAT THE MARKET FOR THE DELIVERY OF VIDEO PROGRAMMING IS VIBRANTLY COMPETITIVE

A. DBS is Stronger Than Ever and Its Share of Multichannel Video Customers Continues to Grow at a Robust Pace

The Ninth Annual Report acknowledged the seemingly inexorable growth of the two nationwide DBS operators, EchoStar and DirecTV.[1] The Commission recognized that "DBS subscribership has grown significantly and now represents 20.3% of all MVPD subscribers. Between June 2001 and June 2002, the number of DBS subscribers grew from almost 16 million households to about 18 million households, which is significantly higher than the cable subscriber growth rate."[2]

This trend has only accelerated in the past year. The number of DBS subscribers increased from 18.21 million to over 20.36 million between June 2002 and June 2003, an 11.8 percent annual growth rate. Meanwhile, cable subscribership continued to decline to under 75 percent of all multichannel video subscribers.

Subscribers to Multichannel Video Program Distributors (MVPD)

[1] Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Ninth Annual Report, 17 FCC Rcd 26901, at 26903-04 (2002). ("Ninth Annual Report").

June 2003

	Subscribers (in Millions)	Percent of Total MVPD Subscribers
DBS	20.36	21.63%
C-Band	0.50	0.53%
MMDS	0.20	0.21%
SMATV	1.20	1.27%
Broadband Service Providers	1.40	1.49%
Non Cable MVPD	23.66	25.13%
Cable	70.49	74.87%
Total MVPD	94.15	100.00%

Source: Kagan World Media, Kagan Media Money, July 22, 2003, p. 7; SkyTRENDS, www.skyreport.com; Nielsen Media Research.

The Commission in July acknowledged the stunning rate at which DBS has become a strong competitor in the video marketplace:

> The public has adopted DBS service at one of the fastest rates of any consumer good in history. At the end of 1994, DBS services had approximately 600,000 subscribers. By 1995, there were more than 2.2 million subscribers, and by 2000, DBS providers had nearly 14.8 million subscribers. In fact, between June 2001 and June 2002, growth in the number of cable subscriptions leveled off to less than one-half of one percent (0.4%), while DBS's growth rate was 14% for the same period. Overall, from 1994 until today, DBS subscribership has grown by an average of about 70% each year.[3]

In its strongest recognition to date of the competitive pressures faced by cable companies, the Commission observed that "the competitive presence of DBS has forced cable television services to expand channel capacity and service options."[4] It acknowledged that cable's implementation of hybrid fiber and coaxial ("HFC") networks – the industry's more than $75

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[2] Id.

[3] 2002 Biennial Regulatory Review—Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, FCC 03-127, rel. Jul. 2, 2003, at ¶ 113 (emphasis added).

[4] Id., ¶ 114.

billion commitment to a platform capable of delivering vastly more channels of video programming, digital programming tiers and advanced two-way services – was "a result of the introduction of the all-digital DBS technology and its widespread acceptance by the public."[5]

Independent Analysts Have Recognized DBS's Growth. Over the past ten years, independent financial analysts too have changed their earlier predictions about DBS' limited appeal and have asserted with increasing vigor the rise of DBS as a fully competitive alternative to cable television.

In 1993, the Wall Street firm of Wasserstein Perella Securities unveiled a report predicting that "DBS will lure only 5.6 million customers by the year 2000, and that DBS will be confined to rural areas."[6] In 1994, Tom Wolzien, an analyst with Sanford C. Bernstein & Co., a New York City investment firm, predicted that DBS might steal away 1% of cable's growth over the next five to six years – "which isn't a killer."[7]

By 1996, analysts became much more optimistic about the future of DBS. In 1996, DBS Digest reported that "[w]here outside analysts used to predict the maximum U.S. market for DBS was 6 million households – about one-tenth of the current number of cable households and a little more than one-sixteenth the number of all U.S. TV homes – some have since revised their estimates to 9 million, then 16 million and even 18 million."[8] And in 2000, Howard J. Postley, director-technology, PricewaterhouseCoopers said "It's pretty clear that DBS is going to gain market share that will potentially exceed cable over the next 5 to 10 years."[9]

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5 Id., ¶ 115.

6 "DBS signals new threat to cable TV business", Variety, June 4, 1993.

7 "Cable Gets Dished", Time, October 31, 1994.

8 "Doing the Dish and Intrepid Satellite TV Viewer Finds a Lot to Like", Chicago Tribune, May 21, 1996.

9 "Energized DBS Keeps Growing and Growing and Growing…", CableWorld, May 8, 2000.

A 2003 Yankee Group report states that "while cable remains the primary source for multichannel video programming, its share of subscribers has declined to 80 percent."[10] The report further notes that "although cable companies continue to add new digital cable and high-speed Internet subscribers, competition [from DBS] is driving down the overall number of cable subscribers."[11] According to a 2003 Carmel Group report, DBS has not only enjoyed a much higher growth rate than cable, it has brought on more net new subscribers than cable every year since 1996.[12]

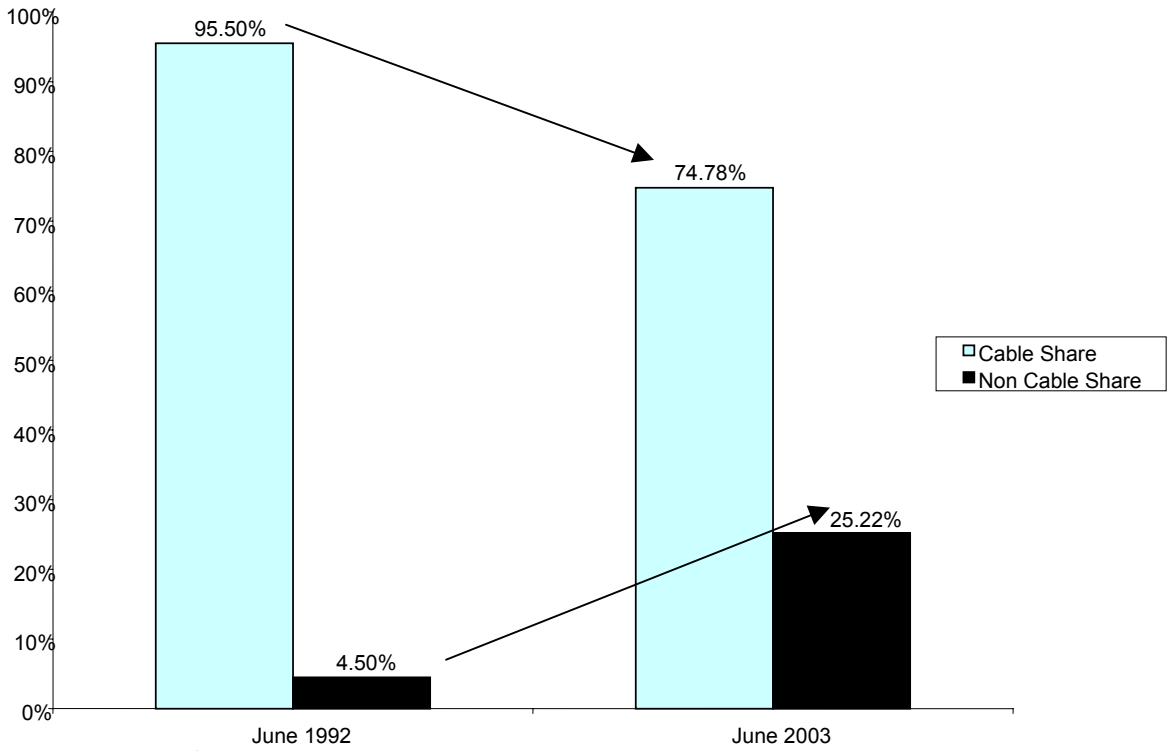
The numbers illustrate what these financial analysts are talking about:

Changes in MVPD Subscribers
June 1992 v. June 2003

[10] "Building Brand Identity in the Multi-Cannel Video Universe", The Yankee Group, February 26, 2003.

[11] Id.

[12] See Carmel Group, Cable vs. DBS comparison chart, 2003.



Source: 1992-FCC 1st Report on Video Competition, 2003. Kagan World Media, Kagan Media Money, July 22, 2003, p. 7; SkyTRENDS, www.skyreport.com; Nielsen Media Research.

In the past seven years, in particular, DirecTV has grown from 1.7 million customers to over 11.5 million. Between June 2002 and June 2003, DirecTV acquired over 800,000 net new customers. EchoStar, the second largest DBS provider, posted gains of 1.3 million new customers in the past year. It has grown from 55,000 to over 8.8 million in the last seven years. Total DBS subscribership has now passed the 20 million mark.

DirecTV, with 11.56 million customers, is the second-largest provider of multichannel video programming in the nation, only exceeded by Comcast. EchoStar has more customers than all but two cable companies.

DBS's State-by-State Penetration Grows. DBS's residential subscriber penetration on a state-by-state basis reveals the breadth of DirecTV and EchoStar's competitive strength. As of

July 2003, direct to home penetration exceeded 30 percent in four states, 20 percent penetration in 29 states, and 15 percent in 40 states.[13]

States With Direct-To-Home (DTH) Dish Penetration Of Fifteen Percent or More (July 2003)

State	Penetration Rate	State	Penetration Rate
Vermont	35.78%	Texas	22.25%
Montana	33.96%	South Carolina	21.70%
Wyoming	31.36%	Virginia	21.34%
Idaho	30.91%	Arizona	21.18%
Utah	29.99%	Oregon	20.93%
Mississippi	28.12%	South Dakota	20.71%
Missouri	27.25%	Wisconsin	20.53%
Arkansas	26.78%	Minnesota	20.39%
New Mexico	25.66%	Maine	20.23%
Georgia	24.93%	California	19.91%
Colorado	24.49%	Nebraska	19.61%
Oklahoma	23.77%	Kansas	18.91%
Indiana	23.08%	Washington	18.62%
Kentucky	22.97%	Alaska	18.46%
North Carolina	22.97%	Michigan	18.32%
West Virginia	22.91%	Florida	17.66%
Alabama	22.74%	Illinois	17.61%
North Dakota	22.49%	Nevada	16.55%
Iowa	22.35%	Louisiana	15.61%
Tennessee	22.28%	Ohio	15.35%

Source: SkyTRENDS SkyMAP, July 2003; www.skyreport.com; TV Household data from A.C. Nielsen.

DBS's dramatic nine-year climb is attributable to a variety of factors – a nationwide footprint, advanced digital technology and aggressive marketing. Equipment prices have steadily declined and DBS providers are now able to transmit local broadcast signals into their

[13] NCTA has previously argued that, with DBS penetration substantially exceeding 15% in increasing numbers of states, the Commission should alter its current rule that, for rate regulation purposes, every cable system is presumed not to be subject to effective competition unless and until it demonstrates that competing MVPDs serve at least 15% of the households in its franchise area. As NCTA pointed out, where statewide penetration significantly exceeds 15%, it would be reasonable and appropriate to presume that cable systems are subject to effective competition. Congress set the bar in 1992 and in a clear majority of states today there is 15% DBS penetration. See Notice of Proposed Rulemaking, Revisions to Cable Television Rate Regulations, MB Docket No. 02-144 FCC 02-177, NCTA Comments, November 4, 2002 at 28-32.

market of origin. DirecTV and EchoStar also enjoy certain efficiencies consistent with their nationwide coverage. And, of course, they operate unencumbered by local franchise fees and the financial burdens of other franchise requirements, including "free" Institutional networks, access studios and staff, and hook-ups for municipal buildings.

With regard to programming, DirecTV and EchoStar deliver virtually the same array of programming found on a typical upgraded cable system. And their size and clout has enabled them to negotiate for carriage of virtually all satellite-delivered programming services. Moreover, they have obtained exclusive rights to valuable sports programming.[14] They are deploying advanced technologies, such as high definition television, personal video recorders and other digital services, to compete with cable. For example, on July 1, 2003, DirecTV launched a new high definition programming package with seven satellite-delivered HD channels.[15] EchoStar recently entered into a partnership with Earthlink to provide satellite customers with Internet access. In announcing the deal, an EchoStar official declared this combination of satellite TV and DSL Internet provides "an attractive entertainment and information package offering an alternative to digital cable packages."[16]

News Corporation Chairman Rupert Murdoch recently indicated that the satellite industry is likely to offer personal video recorders for free or at very low cost within a year, as it seeks customers in competition with the cable industry.[17]

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[14] See e.g., "NFL and DirecTV Extend and Expand Exclusive NFL Sunday Ticket Agreement for Five Years, NFL Channel to Launch on DirecTV", Press Release, December 11, 2002.

[15] "DirecTV to Launch New High Definition Package", Press Release, June 3, 2003.

[16] "EchoStar, Earthlink Announce Customer Savings Through Bundled Packages", Press Release, February 10, 2003.

[17] "Satellite Firms Eye Free Digital Recorders-Murdoch", Reuters, September 8, 2003.

Ad campaigns targeting cable customers have long been a staple in DBS's competitive arsenal. This past year is no different. Last October, DirecTV launched an advertising campaign targeting cable customers and promoting the theme that DirecTV delivers superior customer service over cable.[18] DirecTV recently launched a new marketing campaign touting the superiority of DBS over cable.[19] DirecTV and EchoStar have run national TV ads in recent months and plan to target large audiences this fall during baseball's postseason games and NFL football games with national ads aimed at convincing more viewers to choose satellite over cable.[20]

A Forrester Research Inc. analyst summed up the heated battle between cable and satellite:

> The competition between the two services has . . . blossomed into a full-blown rivalry, as satellite started to snap up big spending television fanatics who used to choose cable. . . As a result, cable is rolling out new features to counter satellite services, while both are offering new deals, bundling new services and creating two distinct products.[21]

There is perhaps no greater indicator of a vibrant market for the delivery of video programming, teeming with competitors trying to stay one step ahead of each other, than the recent alliances between DirecTV and EchoStar with RBOCs Qwest, SBC Communications, and BellSouth. As discussed in the next section, the hotly-contested market for customers is resulting in strategic partnerships and industry re-alignments aimed at bundling a wide variety of communications services by cable, satellite and telephone companies.

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[18] "DirecTV Launches National Advertising Campaign Targeting Disgruntled Cable TV Customers", DirecTV Press Release, October 14, 2002.

[19] "Dramatic Celebrity Readings of Fan Mail Set Stage for DirecTV Marketing Campaign", DirecTV Press Release, June 16, 2003.

[20] "EchoStar, DirecTV Add Spin to Pitches", Cable World, August 20, 2003.

In This Environment, Cable Can No Longer Be Deemed "Dominant." In light of the dramatic growth of the DBS providers over the last decade, it is time for the Commission to depart from prior conclusions that cable systems are "dominant" in the MVPD marketplace. While cable's market share is the largest, the use of the term "dominant" may suggest, in communications parlance, a status that does not reflect the video marketplace reality.

The Commission held more than a decade ago, "[m]arket share alone is not necessarily a reliable measure of competition, particularly in markets with high supply and demand elasticities."[22] Thus, when it reclassified AT&T as "non-dominant" in the mid-1990's after a decade of change in the interexchange services marketplace, it noted that "AT&T faces at least two full-fledged facilities-based competitors. Both MCI and Sprint have nationwide networks that are fully capable of offering most consumers an alternative choice of services relative to AT&T."[23]

The competitive circumstances now experienced by cable systems are analogous. In EchoStar and DirecTV, cable companies face at least two full-fledged facilities-based competitors with the ability to serve virtually the entire nation with their existing facilities. Both EchoStar and DirecTV have satellites that already offer most consumers a comparable alternative to their incumbent cable operator.[24]

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[21] "Cable or Satellite: The rivalry heats up", Cleveland Plain Dealer, May 19, 2003, quoting Josh Bernoff of Forrester Research.

[22] Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier, 11 FCC Rcd 3271, 3308 (1995), citing Competition in the Interexchange Marketplace, 6 FCC Rcd 5880, 5890(1990) ("First Interexchange Competition Order").

[23] Id.

[24] EchoStar has also struck a deal with SES Americom Inc. for broadband and video capacity on a satellite set for launch in 2004. "EchoStar Revives Broadband Internet Plan", Multichannel News, April 10, 2003.

The Commission found the residential interexchange marketplace "highly demand elastic" because residential customers were perceived as willing to "switch to or from AT&T in order to obtain price reductions and desired features."[25] The same applies to MVPDs. As the numbers cited above show, many consumers have shown a similar willingness to choose one of the alternatives to their incumbent cable operators. Thus, like the interexchange market, the MVPD marketplace is characterized by a high level of demand elasticity.

In these circumstances, as NCTA has previously shown, cable's relatively high share of MVPD customers is no indication at all that cable has any market power or "dominance," in any economic sense. Last year, NCTA submitted an economic analysis by Dr. Debra Aron, Director of LECG, an economic and financial consulting firm, and Professor of Communications Studies at Northwestern University, which fully explained why this is the case.[26]

First of all, according to Professor Aron, "market share is a particularly inappropriate measure of competition in a market that is emerging from regulated monopoly environment, because an incumbent's market share tends to understate the degree of competition during a transition to competition, and tends to underestimate a competitor's future competitive significance."[27]

Second, Professor Aron pointed out that market shares are not a good measure of market power in a market in which there are no significant barriers to expansion by competitors:

> If competitors could expand their output or enter the market with sufficient capacity in a timely fashion to satisfy the demand for alternatives created by the firm's price increase, those competitors would impose a competitive constraint on

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[25] Motion of AT&T Corp. to be Reclassified as a Nondominant Carrier, 11 FCC Rcd section 3271 at 3305 (1995).

[26] Statement of Professor Debra F. Aron, attached to NCTA Comments in MB Docket 02-145, July 29, 2002; Appendix B to these comments ("Aron").

[27] Id. at ¶ 30.

> the firm's ability and desire to raise its price. That is, they would decrease or eliminate its market power.[28]

Therefore, according to Professor Aron, it is important, in assessing competition, to consider "the extent to which the existing facilities of firms can serve new customers without substantial incremental cost."[29]

In this respect, the video marketplace does not resemble the typical manufacturing marketplace, in which firms that collectively serve only 25 percent of the market can rarely expand capacity to serve the entire market. In such markets, a firm that serves 75 percent of the market may be able to raise prices above competitive levels without worrying about losing many customers – which is why market shares are often used as at least an initial indicator of market power in such markets. But in the marketplace in which cable and DBS compete, a cable operator's high market share indicates *nothing* about market power, because DBS can immediately absorb and serve the vast majority of the operator's current subscribers.

B. Competition Among Providers of Bundled Video, Voice and Data Services Has Accelerated

As the Commission has observed, the concept of bundling a variety of communications services – video, voice and data – into one package has been part of the video delivery equation in recent years.[30] Cable, satellite and telephone companies have offered various forms of one-stop shopping mechanisms to their customers, including entering into partnerships and marketing deals to facilitate such arrangements.

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[28] Id., ¶ 26.

[29] Id., ¶ 38.

[30] Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Eighth Annual Report, 17 FCC Rcd 1244 (2002) ("Eighth Annual Report"); Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Sixth Annual Report, FCC 99-410, rel. Jan. 14, 2000.

Why is this year any different? First, with advancements in technology, new digital services – from video-on-demand to personal video recorders to high definition television – are no longer unproven services. They are in the marketplace – today – and consumers are becoming increasingly aware of their ability to control what they watch, when they want to watch it. Second, consumers are embracing broadband Internet access at a rapid rate and seeing the value in high speed service offerings. Third, telephone companies have re-energized their efforts to become full-scale players in the provision of voice, video and data services to their over 50 million customers.

This competitive equation has become increasingly more complex as the range of new services within the broad headings of "video, voice and data" seems almost endless. The cable and satellite industries are "stak[ing] their competitive future on a panoply of services that go far beyond the daily program grid."[31] As Bruce Leichtman, President of Leichtman Research Group, put it:

> As the ability to expand the total number of video subscribers becomes increasingly limited, competition between cable and DBS intensifies. The challenge for cable and DBS providers is to deliver a variety of services and packages that help to both attract and retain subscribers.[32]

Similarly, Strategy Analytics predicts growing competition between satellite and cable for digital customers.[33]

Telco-DBS Bundles. Telephone companies too are "gearing up for an increasingly intense battle with rival cable operators" with recent announcements of joint marketing partnerships between SBC Communications Inc. and EchoStar. Qwest Communications

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[31] "Cable or Satellite? Please Stay Tuned, One-Upmanship Yields an Array of New Services As Even Phone Companies Enter the TV Picture", The New York Times, July 31, 2003.

[32] "Competition Heats Up Between DBS, Cable", CyberAtlas.com, July 11, 2003.

International also joined forces with EchoStar and DirecTV, and BellSouth recently teamed with DirecTV.

The recent moves by cable companies, satellite companies and phone companies, as The New York Times put it, "underscore the frantic pace at which such companies are offering new TV services."[34] It is becoming increasingly harder for consumers to decide among the array of services from the array of providers. As one media observer noted:

> Each sector of competitors has built some advantages over the others. Cable companies have a leg up in offering video on demand; satellite rivals are countering with an emphasis on sophisticated video recorders. Cable companies have far outpaced phone companies in providing high-speed Internet service, an area in which the satellite companies are hardly even players. Satellite companies have the lead in delivering high definition television programming, but cable companies are catching up. [35]

The strategic partnership between SBC Communications, Inc. and EchoStar illustrates this very significant recent development. In July 2003, SBC announced that it will invest $500 million in EchoStar in exchange for the exclusive rights to co-brand "SBC Dish Network" in its 13-state service region.[36] SBC plans to deliver a full package of residential services, including television, high speed Internet access, wireline and wireless telephone service. As explained by SBC Chairman Edward Whitacre:

> For the past several months, we've aggressively looked for the best way to integrate television into our bundles of consumer services. . . This first-of-its-kind milestone agreement with EchoStar gives us what we've been seeking and puts us

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[33] Id.

[34] "Cable or Satellite? Please Stay Tuned, One-Upmanship Yields an Array of New Services As Even Phone Companies Enter the TV Picture", The New York Times, July 31, 2003.

[35] Id.

[36] See e.g., "SBC to Co-Brand EchoStar's Dish", Multichannel News, July 21, 2003.

> in a great strategic position to compete with any provider – telecom or cable company – in the years ahead. [37]

EchoStar Chairman and President Charlie Ergen said "by co-branding SBC and Dish Network services, our customers will have greater exposure to the benefits of satellite TV with the added convenience of a bundle. . . . With this partnership, we continue our efforts to make Dish Network even more competitive with cable TV providers."[38]

With SBC's enormous customer base (56 million access lines and 25 million customers) and EchoStar's nationwide footprint, this combination will have increased competitive muscle against cable. SBC expects to exploit its bundling of video, voice and data in a fast, efficient and cost-effective manner, while EchoStar expects to gain immediate access to the millions of SBC customers and the company's strong regional brand.[39]

On the heels of the SBC – EchoStar deal, DirecTV and BellSouth entered into an agreement whereby DirecTV service will be available to BellSouth's customers as part of BellSouth's Answers(SM) bundle.[40] Clearly, this deal was a target response to cable's bundled service: "[t]he bundled offer with BellSouth provides consumers with an extremely compelling alternative to the incumbent cable provider," said Steve Cox, executive vice president of Sales, Distribution and Customer Acquisition, DirecTV. "The alliance with BellSouth, a leading

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[37] SBC Communications, Echostar Forge Strategic Partnership, will offer 'SBC Dish Network Television Service', Press Release, July 21, 2003; "It's a Pick-and-Choose Phone Market; California consumers see more products and services as telecom competition heats up", Los Angeles Times, August 3, 2003.

[38] SBC Communications, Echostar Forge Strategic Partnership, will offer 'SBC Dish Network Television Service,' Press Release, July 21, 2003.

[39] See e.g., "SBC Makes A Smart Choice with EchoStar", Charles S. Golvin, Forrester Research, Inc., July 22, 2003.

[40] "BellSouth® and DIRECTV® announce agreement to sell digital satellite television service as part of BellSouth Answers(sm) bundle," BellSouth press release, August 27, 2003.

broadband provider, gives us an experienced partner in the Southeast and the tools to aggressively compete against cable's strategy."[41]

Qwest, the fourth largest telephone company, entered into an alliance with EchoStar and DirecTV in July 2003.[42] Under the marketing arrangement, Qwest's 25 million customers will be

able to order local, long distance, wireless, DSL and TV service with a single phone call. While billing will be handled separately by each company, Qwest officials said that the satellite deals represent "the first step in the process to bundle video with Qwest's other communications services" in the future. Qwest expects to roll out the EchoStar and DirecTV services to its customers this year and early next year.

In addition to entering into joint ventures with the satellite industry to counter cable's success in providing high-speed Internet service and to ward off cable's growing competition in their core telephone business,[43] some telephone companies are seeking to rebuild and upgrade their facilities by installing fiber to the home. Verizon Communications plans to meet growing competition from cable by "leapfrogging" technologies. As Verizon President and Vice Chairman Lawrence Babbio sees it, "the cable companies rolled out coax (hybrid-fiber coax wiring). Now we'll roll out (nonhybrid) fiber."[44] Verizon is looking to compete with cable in every arena by offering the complete portfolio of services (aided by its existing wireless

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41 Id.

42 "Qwest Forges Agreement with DirecTV to Offer Satellite Services as Part of Communications Bundle", Press Release; July 21, 2003; "SBC, Qwest announce triple-play deals", Network World Fusion, July 21, 2003.

43 "SBC and EchoStar: Betting on the Bundle," James Penhune, Strategy Analytics, July 3, 2003; "SBC to add satellite TV to its menu", Chicago Tribune, July 22, 2003; "Verizon Might Up Stakes vs. Cable Rivals," Investor's Business Daily, July 14, 2003.

44 "Verizon Might Up Stakes vs. Cable Rivals," Investor's Business Daily, July 14, 2003.

service).[45] Verizon has stated that it is ready to start a fiber build-out in some residential areas as early as 2004. Last May, it announced an agreement with SBC Communications and BellSouth to use similar fiber-optic hardware and software to expand their networks.[46] The telcos could potentially deliver all forms of video, including programming networks, high definition programming and narrowcast video streams to specific homes.

Cable Bundles. Meanwhile, cable companies, which already serve 2.5 million residential subscribers with circuit-switched telephony, are pursuing Voice over Internet Protocol ("VoIP") service. These companies include Cox Communications, Charter Communications, Time Warner Cable, Comcast Cable, Insight Communications and Armstrong Cable.

Time Warner Cable initiated a commercial VoIP service in Portland, Maine earlier this year, and plans to test the service in its Rochester, NY and North Carolina systems by the end of this year.[47]

In April 2003, Cox launched a VoIP trial in Roanoke, Virginia and conducted a trial in Oklahoma City last year. It recently signed deals with equipment makers and other companies to supply Internet-based calling systems and VoIP software.[48] As of June 30, 2003, Cox already had a strong presence in the telephone business through Cox Digital Telephone, which currently serves more than 838,716 cable telephony customers and is available to more than 4.57 million homes in ten markets. With an overall penetration rate of 18.4 percent in telephony-ready

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[45] Id.; "SBC, Qwest Reach Deals with Satellite TV Providers", The Wall Street Journal, July 23, 2003.

[46] "BellSouth, SBC, Verizon Adopt Common Requirements for FTTP", Communications Daily, May 30, 2003; "RBOCs Push Fiber Closer to Users", Network World, June 2, 2003.

[47] "Cablevision and Time Warner target Baby Bell customers with their new Internet phone service", Newsday, September 7, 2003.

[48] See e.g., "Cox dialing Into Internet Telephony Field", Investor's Business Daily, August 2, 2003.

homes, Cox has reached penetration rates exceeding 30 percent in the markets it has served the longest. The service costs an average of 10 percent less than many local exchange carriers for the first line and offers as much as a 50 percent discount on second phone lines.[49] As part of its bundling strategy, Cox offers discounts to customers who buy phone services along with video and Internet access.

Comcast has begun trials of VoIP in several markets around the country, and is already the 10th largest CLEC in America.[50] Charter, which has approximately 23,700 cable telephony customers, began a VoIP technical trial in Wausau, Wisconsin earlier this year and plans to test the service in other markets by year-end.

Other cable companies are offering local telephone service and preparing to launch VoIP in the near future. Cablevision Systems' CLEC subsidiary, Cablevision Lightpath, currently sells its Cablevision Optimum Telephone Service to approximately 11,700 residential customers in parts of New York City, Long Island and Connecticut. Cablevision Systems Corporation plans to introduce Internet-based phone service on Long Island, New York later this year. The company has been testing its new Optimum Voice service in Nassau County since January and will begin rolling it out in September.[51] By November, Cablevision expects to offer the service to the more than 1 million customers who get Optimum Online. Optimum Voice charges $34.95 per month for unlimited local and long-distance calls, including extra features such as call waiting.[52]

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[49] "Cox Communications Announces First Quarter Financial Results for 2003", Cox Investor Relations, May 5, 2003.

[50] As of June 30, 2003, Comcast had approximately 1,366,500 telephony customers and its telephone service is available to over 9.16 million homes in its service areas.

[51] "Cablevision and Time Warner target Baby Bell customers with their new Internet phone service", Newsday, September 7, 2003.

[52] Id.

All of this telephone-related activity is further evidence that cable companies are not sitting still in the face of a range of full service competitors. And the bundling strategies of cable, satellite and telephone companies are fueling competition as never before. As an executive for Insight Communication's Columbus, Ohio cable system explained, "now that we bundle our products, what we hear from our customers is that's a big advantage, the convenience of the bundle, the one bill, the one-stop shop."[53] The system's director of marketing described its strategy for meeting escalating competition from DirecTV, EchoStar, WideOpenWest and others:

> With WOW and DBS, anything we can do to personalize our service to any group of people is a huge plus. Retention is incredibly key for us going forward. The subs are getting harder for everyone to come by so what will keep us growing is loyalty.[54]

In addition to offering bundled services, the system offers a variety of local news and sports coverage and is preparing to offer a Hispanic programming tier this year to reach its largely Mexican-American market.[55]

C. Overbuilders and Other Broadband Providers Continue to Compete with Cable in Major U.S. Markets

Although DirecTV and EchoStar are cable's largest MVPD competitors, cable companies continue to face competition from other facilities-based providers. As demonstrated in the chart on MVPD subscribership on page 8, Broadband Service Providers ("BSPs"), SMATV operators, MMDS companies and C-band satellite operations serve approximately 3.3 million video customers, and many more have the option of taking these services.

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[53] "Using Partnerships to Build A Presence", Cable World, March 31, 2003.

[54] Id.

[55] Id. The system also competes with phone company Vonage for broadband customers.

Most significantly, in recent years BSPs have established themselves as increasingly prominent providers of video programming services and broadband Internet access in selected markets. According to the most recent data, the number of BSP customers grew from 1.2 million to 1.4 million in the last 12 months. This growth occurred despite aggressive marketing efforts by cable companies, DirecTV and EchoStar, and the expansion of service options by these companies.

In the Ninth Annual Report, the Commission explained the business strategy employed by BSPs to overbuild existing cable operators. As the Commission recognized last year, unlike cable operators that serve all but the most sparsely populated areas, "BSPs attempt to overcome the historical difficulties of overbuilding by building state-of-the-art systems in communities with favorable demographics and by offering bundles of services to increase per subscriber revenue and decrease churn."[56] By offering their services in markets "with favorable demographics," BSPs appear to be engaging in "cream-skimming." If this is the case, wireline overbuilding may have limited utility as a widespread competitive alternative to existing cable systems, DirecTV and EchoStar.

The Commission has previously distinguished BSPs and conventional overbuilders. In the Eighth Annual Report, the Commission defined "broadband providers" as "newer firms that are building state-of-the-art facilities-based networks to provide video, voice and data services over a single network."[57] By bundling multiple services into a single package, and delivering these services by means of a recently constructed state-of-the-art facility, BSPs hope to gain a competitive edge.

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[56] Ninth Annual Report at ¶ 102.

[57] Eighth Annual Report, 17 FCC Rcd 1244, 1295 (2002).

Data from independent sources demonstrate that three companies are the most prominent providers of BSP services. RCN, the leading BSP, has 426,000 subscribers and ranks eleventh among all cable MSOs. Wide Open West, which expanded through the acquisition of systems formerly owned by Ameritech, ranks fifteenth among all MSOs, with 290,000 subscribers. Knology, the third largest BSP, ranks twenty-sixth among MSOs with 132,000 subscribers.[58] The growth of these companies is particularly noteworthy because they face video competition from three facilities-based entrants.

Recent actions by Starpower, a joint venture of RCN Corporation and Pepco Communications, an affiliate of Pepco Holdings, exemplifies these recent developments. On July 8, 2003, Starpower announced the availability of video-on-demand service to more than 175,000 "marketable homes" in Washington, D.C. and certain nearby areas.[59] As is the case with respect to other areas served by RCN, the newly available VOD service, when combined with more conventional video services, HDTV, broadband Internet access and telephone service, will result in the competitive availability to potential subscribers of a versatile array of communications services.

In addition to the four leading options – cable, the DBS services, and BPS, alternative video delivery vehicles persist in some areas. Most prominently, approximately 1.2 million

[58] Kagan World Media, Cable TV Investor: Deal & Finance, July 30, 2003 at 15.

[59] "Starpower Launches Video-on-Demand to Over 175,000 Homes: Customers in Washington, D.C. Market Can Now Access Starpower Impulse on Demand", Starpower Press Release, July 8, 2003.

residents of multiple dwelling units continue to receive SMATV service. And tens of thousands of customers obtain video services by means of MMDS and C-band satellite.

D. Rental of Digital Video Discs (DVDs) Through Stores and Over the Internet is Growing Rapidly and Offers New Ways to Compete With Cable's Basic and Premium Offerings

As the Commission acknowledged in the Ninth Annual Report, home video (including videocassettes, DVDs and laser discs) competes with DBS, cable and broadcast television for the consumer's time and money. It also noted that "cable video-on-demand is an emerging competitive service to home video."[60]

Over the last year, the phenomenal growth of DVDs has fueled an already strong and highly profitable home video industry. During the first six months of 2003, DVD sales soared 57 percent as compared to the same period a year ago.[61] Equipment manufacturers have sold 10.3 million DVD players so far this year, outpacing the 7.3 million players sold in the first half of 2002. DVD players are available for less than $100, and they can now be found in close to 50 percent of all U.S. homes.[62]

In a recent report by the Video Software Dealers Association, the organization's President, Bo Anderson, proclaimed "home video remains the American consumer's most popular way to view movies and the industry is healthy and growing."[63] Among the report's findings[64]:

- DVD player penetration rose from 25 million households in 2001 to 39 million by the end of 2002, a 58 percent increase.

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60 Ninth Annual Report at ¶ 91.

61 "DVD Sales Soar 57% Above 2002", The Daily News of Los Angeles, July 30, 2003.

62 Id.

63 "Video Trade Association Releases Comprehensive Report on DVD, VHS, and Video Game Sales and Rentals; Details How DVD is Fueling Growth in the $20 Billion Home Video Industry", Business Wire, August 5, 2003.

64 Id.

- Video consumers in the United States doubled their rental spending on DVDs from the prior year, pushing revenues to an unprecedented $2.9 billion in 2002.

- DVD sales, at $8.7 billion, were greater than the combined DVD and VHS rental revenue.

- Penetration of VCR hardware, declining but far from dying, rose by almost 4 million U.S. television households to 97 million.

According to Video Store Magazine, consumer spending on home video software is expected to hit a new record, $23.3 billion – an increase of 11 percent over 2002.[65] Of this amount, consumers will have spent $14 billion by year-end on DVDs and video cassettes, most coming from DVD sales, and for the first time DVDs will exceed VHS cassettes in rentals.[66] Boosted by robust DVD sales, Blockbuster Inc.'s second quarter 2003 profit increased nearly 47 percent from a year ago.[67] The company plans to add 300 to 400 new stores by the end of this year.

In a recent article in The New York Times, DVDs were described as a singular technological advance in thoroughly and quickly changing movies: "sound changed the scope of movies, but it didn't really change the way they were made, the way they were marketed or the way they were watched. The DVD is changing all those things."[68] DVD features such as letterboxing, director and actor commentary, deleted scenes, alternative endings, chapter stops, and many other extras, once only available on expensive laser discs, are now "routinely enjoyed

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[65] "Consumer Spending on Home Video Set for a Record Year; Explosive Sales and Rental of DVD Software Fuels 11 Percent Growth Over 2002", Business Wire, July 29, 2003.

[66] Id.; "DVDs Spin Past VHS Tapes in Rentals; Cassettes lag behind discs for the first time, but some say the format is far from obsolete", The Los Angeles Times, June 21, 2003.

[67] "Blockbuster earnings trounce estimates, helped by DVD sales", Associated Press, July 23, 2003; "Blockbuster's Profit Rises 47 Percent, Boosted by DVD Sales and Rentals", The Dallas Morning News, July 24, 2003.

[68] "Everyone's a Film Geek Now", The New York Times, August 17, 2003.

by mass-market film fans."[69] The DVD has "become so important that the tail now appears to be wagging the dog."[70]

Another aspect of the remarkable DVD story of the past year is the growing strength of the on-line DVD rental business. Netflix, Inc., the leading online movie rental service with a library of more than 15,000 DVD titles, had a subscriber base of approximately 670,000 customers at the close of the second quarter 2002. By second quarter 2003, it had grown to approximately 1,147,000 customers, amounting to a 71 percent increase over last year.[71] Netflix subscribers can rent as many DVDs as they want, with three movies out at a time, and keep them for as long as they like. DVDs are delivered directly to the customer's home and there are no due dates or late fees.

The growing popularity of on-line movie rentals for some consumers as an alternative to cable and other video providers was summed up recently by one film and TV columnist:

> I've just signed up for Netflix myself, and if you've been facing that cable vs. no cable question, or if you've read about a lot of films and documentaries that you can't find at local rental shops, you might want to consider it. For $20 a month (considerably less than cable or other services), you can rent an infinite number of DVDs. You can have three in your possession at one time, and Netflix will send you a constant stream of films based on the rental "queue" you've set up.[72]

Netflix's success spurred the nation's largest retailer, Wal-Mart Stores, Inc., to enter the on-line movie rental business late last year. With an extensive distribution network, a wide selection of DVDs, and a variety of subscription plans, Wal-Mart is a serious new player.[73] And

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[69] Id.

[70] Id.

[71] "Netflix Announces Second Quarter 2003 Ending Subscribers of 1,147,000, Up 71% Over the Prior Year", Press Release, July 1, 2003.

[72] "Screen Lover", Anna Webb, The Idaho Statesman, July 29, 2003.

[73] "Wal-Mart Closes In on – Well, All of It", Seattle Post-Intelligencer, July 8, 2003; "Wal-Mart Rolls Out New Online DVD Rental Plan of $15.54 per month", Press Release, June 10, 2003.

now Blockbuster, the leader in video store rentals, is poised to introduce its own Internet-based subscription rental service next year.[74] In addition, in response to the provision of HDTV programming by cable and DBS operators, the home video industry is pursuing its own high definition products, known as HD-DVD.[75]

Cable operators are looking to secure their base, lure new customers, and stay one step ahead in the provision of premium digital programming. For example, in an effort to counter the competitive advantage that the home video and DVD industry enjoys from early release windows, "cable companies are trying to convince the Hollywood studios to reduce the time between a blockbuster movie's arrival on the video shelf and its debut on a cable system server."[76]

Most significantly, cable's new ability to offer true video-on-demand (VOD) makes it an attractive substitute for video rentals. VOD enables consumers to purchase and view movies at their leisure, with fast forward, rewind and pause functionality. In addition to offering VOD movies on a pay-per-view basis, cable operators are also offering "subscription video-on-demand" (SVOD). For a single monthly fee, SVOD subscribers may watch an array of on-demand programming, with all the VOD functionalities. For example, HBO, Showtime and Starz all offer packages of their movies and original programming on an SVOD basis.

E. Cable Increasingly Competes with New Broadband Internet Content

Cable faces increasing competition from video services delivered over the Internet. With more than 20 million homes (cable and DSL) having high-speed connections, consumer

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[74] "Blockbuster's Profit Rises 47 Percent, Boosted by DVD Sales and Rentals", The Dallas Morning News, July 24, 2003.

[75] "DVD Sales Soar 57% Above 2002", The Daily News of Los Angeles, July 30, 2003.

[76] "Narrowing Cable's VOD Window: Industry Urges Studios to Bridge Gap with Home Video", Multichannel News, June 9, 2003.

acceptance of broadband content – including on-line movies, sports and video games – is steadily growing.

For example, in November 2002, five studios, Metro-Goldwyn-Mayer, Paramount Pictures, Sony Pictures Entertainment, Universal Studios and Warner Bros. Studios, launched Movielink.com, an on-line video on demand service. The company rents movies online for $3 to $5 each, which are downloaded into a customer's computer for playback. According to press reports, Movielink is mounting a major advertising campaign and buying print and online ads to attract more customers.[77]

Movielink is only one of the providers of online video content. CinemaNow offers on-line movies from Fox, MGM, and Warner Bros., and Disney recently announced plans to launch MovieBeam.[78] Other examples of broadband video Internet content services that are competing with cable's video services for viewer attention include:

- Disney's Toontown, an online game in which hundreds of players work together with Disney characters to defeat a common foe. Originally set to roll out over a year ago, it was nearly abandoned because dial-up connections took 40 minutes just to download software to play the game. But last fall, Toontown launched because competitive broadband penetration has approached critical mass.

- ABC has taken all free video clips off ABCNews.com and instead launched a subscription service, ABC News on Demand, for $4.95/month – again because a critical mass of high speed connections was in sight to make a business.

- Major League Baseball and RealNetworks are offering high quality video webcasts of major league games for $6-$10 a month.

- Yahoo launched its Platinum broadband subscription service in March 2003. Subscribers to this service have access to "… content from Showtime (boxing), National Geographic, CNBC, Major League Soccer, BBC America, ABC News, CBS Marketwatch, NASCAR, Discovery, The Learning Channel, Animal Planel, Travel Channel, the Weather Channel,

[77] "Movielink service polishes its act", San Francisco Chronicle, September 8, 2003.

[78] Id.

CBS's *Survivor Insider* and Warren Miller Entertainment, among other content providers."[79]

- AOL Broadband offers a broad range of movies, television series, reality TV, music performances, sports, news and weather programming.[80]

These broadband services illustrate the vast and growing array of video programming alternatives available to residential subscribers over the Internet.

II. CABLE'S PRICE INCREASES ARE A FUNCTION OF INCREASED COSTS AND INCREASED VALUE AND ARE WHOLLY CONSISTENT WITH A FULLY COMPETITIVE MARKETPLACE

In its Notice of Inquiry, the Commission recognizes that simply comparing changes in the price of cable programming tiers to the Consumer Price Index is meaningless for a product or service whose composition and quality, like cable's, is significantly enhanced from year to year. The Commission asks whether there is any meaningful way to measure changes in price that takes into account these changes in quantity and quality of services offered. NCTA, in turn, asked economist Steven S. Wildman, James H. Quello Chair of Telecommunications Studies at Michigan State University, to address this issue. His conclusions are set forth in a paper attached to these comments.[81]

A. Comparing Price Increases to the Rate of Inflation Indicates Nothing About the Extent of Competition in the Marketplace

As Professor Wildman notes, it's important to point out at the outset that the mere fact that prices increase faster than inflation would not be a meaningful indicator of the extent of competition in a marketplace, even if the composition and quality of the relevant product were

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[79] "Yahoo Platinum: The Broadband Content Play", Multichannel News, Jun. 2, 2003.

[80] "What is AOL for Broadband? Programming Made for High-Speed: Now Playing", htpp://free.aol.com/aolbb/what/prog_nowplaying.adp?promo=41258.

[81] S. Wildman, "Assessing Quality-Adjusted Changes in the Real Price of Cable Service", September 10, 2003, Appendix A to these comments ("Wildman").

constant from year to year. There is no economic basis for supposing, as cable's critics often contend, that rapidly increasing prices somehow indicate a lack of competition in the marketplace. This is a point that was made and explained by economist and antitrust expert, Debra J. Aron, Director of LECG and Professor of Communications Studies at Northwestern University in an attachment to the comments filed by NCTA in last year's proceeding.[82]

Professor Wildman briefly explains once again why this is the case. He points out that "[a]t the heart of the fallacy is a confusion of levels of prices with trends in prices."[83] While it's true that "[a]t any point in time, prices will be higher if the firms serving a market have market power than if they don't,"[84] it does not follow that a monopolist's prices will necessarily increase at a faster rate than a competitive firm's:

> We expect profit-maximizing firms to fully exploit such market power as they have. An implication of profit-maximization, however, is that by themselves trends in prices over time can tell us nothing about whether the firms serving a market have market power. While prices are influenced by the competitiveness of the markets in which firms sell their products, a large number of other factors influence prices, and these may vary independently of the competitiveness of markets. Other major categories of price-influencing factors would include costs (both fixed and variable), the level of consumer demand for a market's products, and product quality. If firms set prices to maximize their profits in each period and prices change from one period to the next, it can only mean that one or more of the many elements in their profit calculus changed between the two periods, nothing more.[85]

B. Prices Are a Function of Costs, and Cable Faces Higher-than-Average Cost Increases

As Professor Wildman suggests, prices are largely a function of costs. And when it comes to costs, there's nothing magic or sacrosanct about the rate of inflation. Inflation simply

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[82] See Appendix B to these comments.

[83] Wildman at 3 (emphasis added).

[84] Id.

[85] Id.

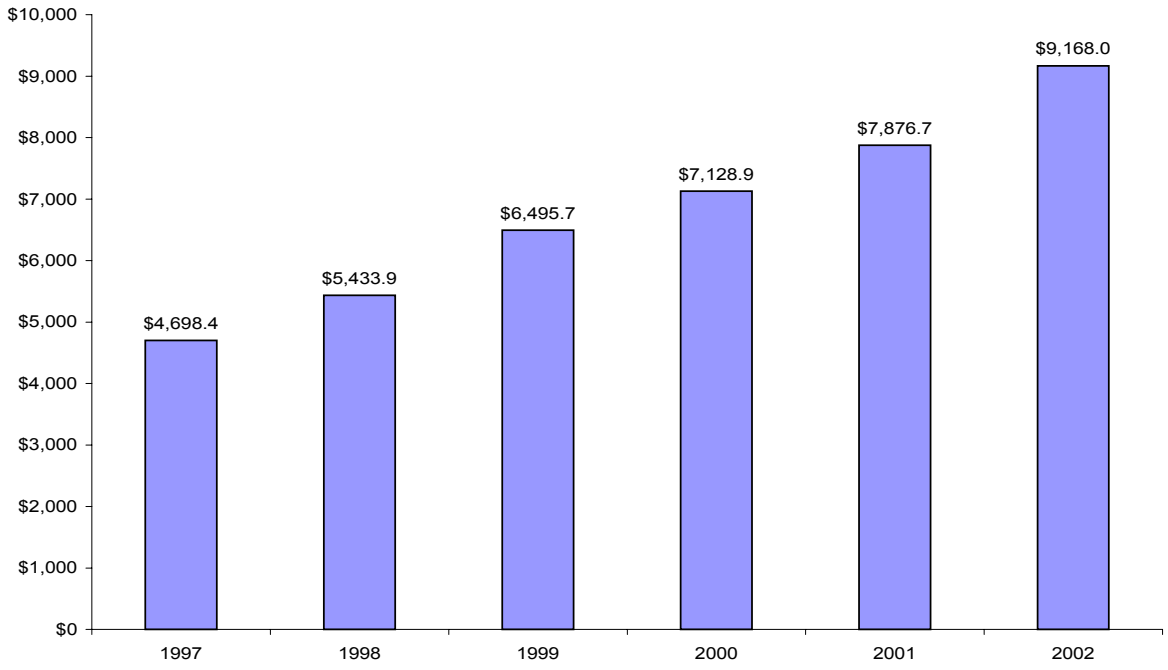
represents the national average rate at which prices of all sorts of goods and services increase over time. The costs of the inputs of production and other costs associated with those goods and services vary widely. Not surprisingly, some costs and prices exceed the average, while others are below average.

Many of cable's costs persistently increase faster than the average, even holding constant the quality and quantity of services offered. For example, in many cases, cable networks' costs of producing or acquiring essentially the same programming have increased at rates higher than inflation. The fact that an increasing number of program networks are competing for viewers has not only caused networks to invest in higher quality programming. It has also resulted in increased demand among networks for existing programming, driving up the price of programming acquisition.[86]

Between 1997 and 2002, expenditures by basic cable networks for original programming and program acquisition increased by 95% – an average of 19% per year – from $4.69 billion to $9.17 billion:

Basic Cable Network Expenditures for Original
Programming and Program Acquisition
($ Million)

[86] See, e.g., "A&E Snaps Up 'CSI: Miami'", E! Online, April 18, 2003, http://www.eonline.com/News/Items/0,1,11645,00.html



Source: Kagan World Media, Economics of Basic Cable Networks 2003, pp. 18-19.

In many cases, increases in cable program costs reflect decisions of cable networks to upgrade the quality of their programming. The fact that an increasing number of program networks are competing for viewers has not only caused networks to invest in higher quality programming. It has also resulted in increased demand among networks for existing programming, driving up the price of programming acquisition.[87] In other words, just as cable operators have incurred significant expenses to improve their facilities, many cable program networks have sought to enhance the value of their programming to cable operators and viewers by producing or purchasing more attractive – and more expensive – programming.

A major source of sharply increasing costs to program networks, and, ultimately, to cable operators and cable customers is sports programming. The proliferation of cable networks has been an enormous boon to sports fans, offering far more televised sporting events than were

available in the pre-cable era of broadcast television. But competition among sports networks, along with astronomical player salaries, has also caused the cost of television rights for major sporting events to skyrocket. For example:

> **National Basketball Association.** The NBA sold national rights for carriage on NBC, TBS and TNT for 1994-1997 for a total of $278 million per year. For 1998-2002, the amount increased by 121%, to $615 million per year. The most recent six-year deal, for carriage on ABC, ESPN, TNT and a new AOL sports network, pays the NBA $765 million per year – a 25% increase over the previous contract.[88]
>
> **National Football League.** The NFL's fee for national television rights for 1994-1997 was $1.1 billion per year. For 1998-2005, that amount increased by 106%, to $2.27 billion per year.[89]
>
> **Major League Baseball.** In 2000, Fox and ESPN entered into six-year national rights deals with Major League Baseball for $2.5 billion and $800 million, respectively, which gave baseball "a 44 percent increase in licensing fees from the previous deal, which included . . . additional coverage from both ESPN and NBC."[90]
>
> **National Hockey League.** The NHL's national television rights fees from ESPN and FOX for 1994-1999 totaled $44 million per year. For 1999-2003, the fees for carriage on ABC and ESPN increased by 173%, to $120 million per year.[91]

Another factor that has driven up consumer prices is the "retransmission consent" provisions of the Cable Consumer Protection and Competition Act of 1992. Although broadcasters are given free spectrum by the government in return for serving their entire communities with free television service, the 1992 Cable Act gave broadcast stations the right, for the first time, to demand compensation from cable operators for the right to retransmit their signals to cable consumers.

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87 Id.

88 "NBA Deal moves to ABC, ESPN", www.espn.com, January 22, 2003.

89 "Money game: Sports becomes big business", Milwaukee Journal Sentinel, January 22, 2000.

90 "Fox Deal: Hit or Miss?", Cablevision, October 9, 2000.

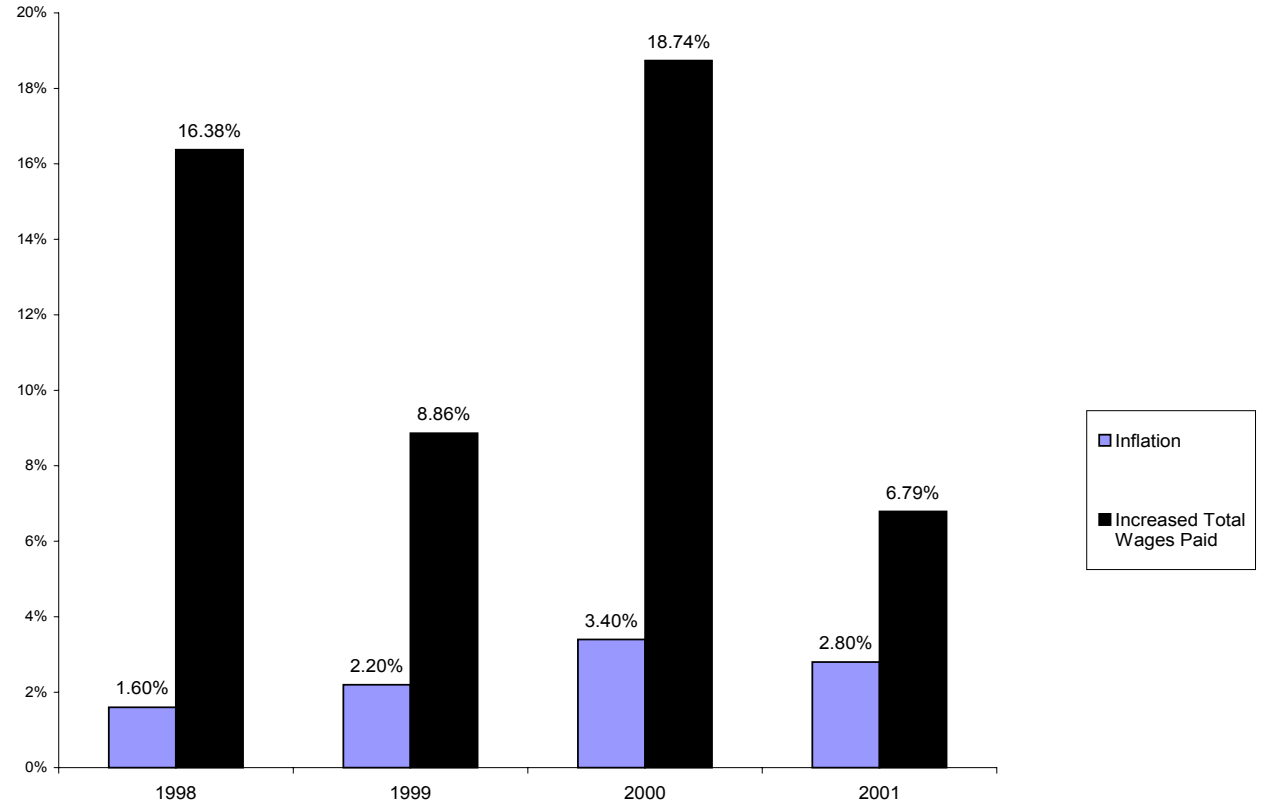
91 "Money game: Sports becomes big business", Milwaukee Journal Sentinel, January 22, 2000.

As discussed in Part IV, below, vertical integration between cable operators and cable programmers has sharply declined in the last ten years. But, at the same time, broadcast ownership of cable programming networks has steadily risen. And this vertical integration has, in many instances, resulted in escalating retransmission consent costs.

While programming costs are one of the largest components of cable operators' operating expenses, they are by no means the only costs rising faster than inflation. Cable's labor costs have consistently risen faster than inflation, as cable operators have upgraded the size and proficiency of their work force, introduced more technologically complex new services, and generally upgraded customer service. The cable industry has, in recent years, sought better educated and more highly trained employees to provide consumer support for the new services that cable operators are offering. These upgrades are not limited to the technological side of the business. Customer service, which used to be available only from 9 to 5 not long ago, is now often available to cable customers on a 24/7 basis, 365 days a year.

The numbers speak for themselves: From 1997 to 2001, total wages paid by " cable and other pay TV services" rose, according to the Bureau of Labor Statistics, by 60.6% – more than 15% per year. This is roughly five times the rate of inflation:

Increase in Annual Wages v. Inflation



Source: Bureau of Labor Statistics; Total Wages Paid for SIC 484 (Cable and Other Pay TV Services), 1997-2001, and CPI-U for All items, 1997-2001.

C. Measured in Terms of Usage by Consumers, the Price of Cable Service per Unit of Viewing Time Has Significantly Decreased

In any event, while many of cable's costs increase more rapidly than inflation wholly apart from any changes in quantity and quality of services, it's obvious that the quantity and quality of services provided by cable operators has not remained constant. To the contrary, as discussed in later sections, both the quantity and quality of services are continually expanding. A quality-adjusted measure of prices would show the extent to which price increases simply reflect enhanced quality and quantity of service, in addition to increased costs.

One quality-adjusted measure of price might be the price per channel of service. But, as the Commission recognizes, this is an imperfect measure. Professor Wildman agrees, and explains why:

> [A]s the FCC observed in paragraph seven of the Notice of Inquiry, "not all consumers watch all channels." As this observation applies to new channels as well as to existing channels, it is possible that the ratio of all new channels to all previously existing channels may be either larger or smaller than the ratio of new channels watched to previously existing channels watched. Viewers also may not value new channels the same as those they were already receiving, which is a second potential problem with a per channel price. A third potential source of bias in this measure is that it cannot reflect changes in the value of previously existing networks to cable subscribers. . . . . If the increased programming expenditures by established networks' made them more valuable to viewers, then price adjustments that only reflect increases in the number of channels over time would fail to capture all of the increased value delivered to cable customers.[92]

Professor Wildman shows that a more precise approach would be to focus on the price paid by cable customers on a usage basis – specifically, "price per viewing hour (PPVH), which is the price cable subscribers pay for service divided by the number of hours spent watching programs on basic cable networks."[93] According to Professor Wildman, "PPVH has the advantage of reflecting in a single measure changes in the nominal price of basic cable service and cable viewers' responses to the changes in the quality of cable services over time."[94]

One indirect indication of usage of cable programming is ratings – i.e., the share of the total audience at any particular time that watches a particular program. As Professor Wildman notes, "[s]lowly, but seemingly inexorably, cable services have been increasing their audience shares at the expense of their broadcast competitors."[95] Indeed, during the past ten years, basic

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[92] Wildman at 12 (emphasis added).

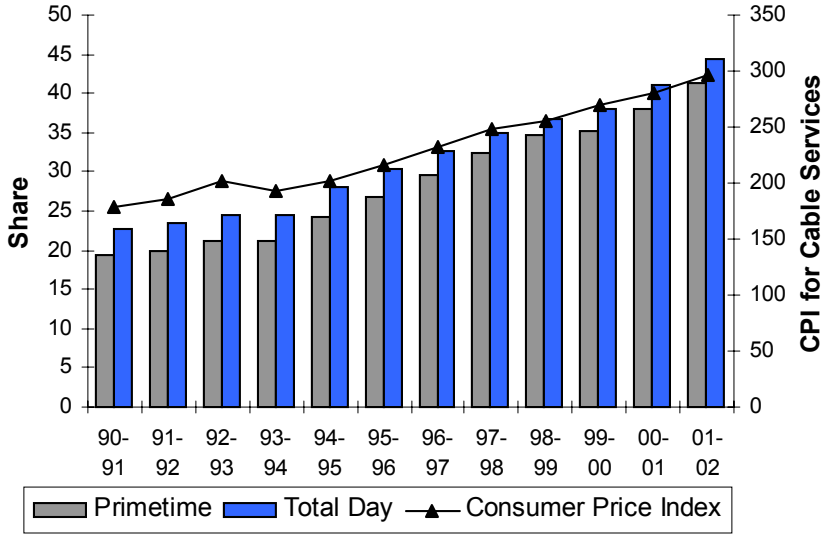
[93] Id.

[94] Id.

[95] Id. at 13.

cable network viewing share in all television households increased 105 percent (and 64 percent in cable households) – outpacing cable prices during the same period.

Cable Price v. Value



Source: CAB, Cable TV Facts 2002, US Department of Labor, Bureau of Labor Statistics, Consumer Price Index Chart. Reported viewing shares are for advertising supported cable, Oct-Sept each year and CPI is for September of each year.

This trend, as Professor Wildman notes, obviously suggests that viewers are spending a greater percentage of their television viewing time watching cable programming. But viewing shares do not directly measure the actual amount of time spent watching cable programming – and, as Professor Wildman reports, "the actual shift in time . . . is almost certainly larger than is generally realized."[96] In the last seven television seasons,

> the amount of time the average cable household spent watching the ad-supported cable networks that predominate in cable systems' expanded basic packages increased by 43 percent – from 24 hours and 22 minutes per week to 34 hours and 44 minutes per week. Even more so than the increases in cable viewing shares that are more commonly cited, this increase in time spent watching cable

[96] Id.

programming is direct evidence of an increase in the value of basic cable programming to cable subscribers.[97]

How does this increase in the value of cable programming compare to the increase in the price of cable service? "Calculated in percentage terms, the two increases were nearly identical, with a slightly larger percentage increase in time spent viewing producing about a three percent decline in subscriber payments per viewing hour."[98] But, as Professor Wildman points out, this is based on the nominal price of cable service and does not take into account inflation: "When the price of basic cable service is adjusted for the reduction in the purchasing power of the dollar over time, the real price paid for an hour of cable viewing is shown to have fallen by about 15.2%."[99]

Moreover, Professor Wildman concludes that the increase in the amount of time watching cable programming may actually understate the extent to which the quality and value of the programming has increased over time. As a result, the 15.2% decrease in the inflation-adjusted price per viewing hour "may substantially understate the extent to which the real quality-adjusted price of basic cable service has declined."[100]

III. THE CABLE INDUSTRY'S ACTIONS REFLECT THE CHALLENGE OF A HIGHLY COMPETITIVE VIDEO MARKETPLACE

A. Cable Has Invested Over $75 Billion in Infrastructure Upgrades to Offer New Services

Infrastructure Investment. As DBS and other video providers have grown, cable has responded by expanding and enhancing its service offerings. With the passage of the 1996

[97] Id. at 13 – 14 (emphasis added) (footnote omitted).

[98] Id. at 19 (emphasis added).

[99] Id.

[100] Id. at 20.

Telecommunications Act, and the coming deregulation of cable services in 1999, the cable industry found an investment community receptive to its long-constrained efforts to develop new products and services. Cable companies embarked on a massive rebuilding of their systems, replacing hundreds of thousands of miles of coaxial cable with fiber optics and adding digital capabilities. Since 1996, the cable industry has invested more than $75 billion in system upgrades – more than $1,000 for every cable customer.[101]

As described earlier, cable systems now not only offer consumers a broad array of additional video programming options, but are the leading providers of high-speed Internet service and, in an increasing number of communities, competitive local telephone service. Over 20 million customers voluntarily purchase optional "digital tiers" which include up to 260 additional channels of video programming, CD-quality music, and video-on-demand offerings.

Digital technology and the additional capacity on cable systems enable consumers to choose multiple channels of premium movie services, as well as a broad array of pay-per-view programming. And cable operators are now using their digital capacity to offer high-definition programming provided by cable networks and broadcast stations.

Starting from scratch, cable operators took the risk of introducing cable modem service and have fundamentally changed the Internet experience for more than 13.8 million households, as of June 30, 2003, helping to create a national broadband policy and debate.[102] And, as a result, local telephone companies, who had been waiting on the sidelines until cable operators successfully tested the residential market, introduced DSL – their own high-speed Internet

[101] "Reinvesting in America: An Analysis of the Cable Industry's Impact on the U.S. Economy", Bortz Media & Sports Group, Inc., July 2003, at 15.

[102] NCTA Research based on company data as of June 30, 2003.

service. Cable modem service and DSL now compete vigorously and high-speed Internet service is already available to 80% of the nation, and already over 20 million households subscribe.[103]

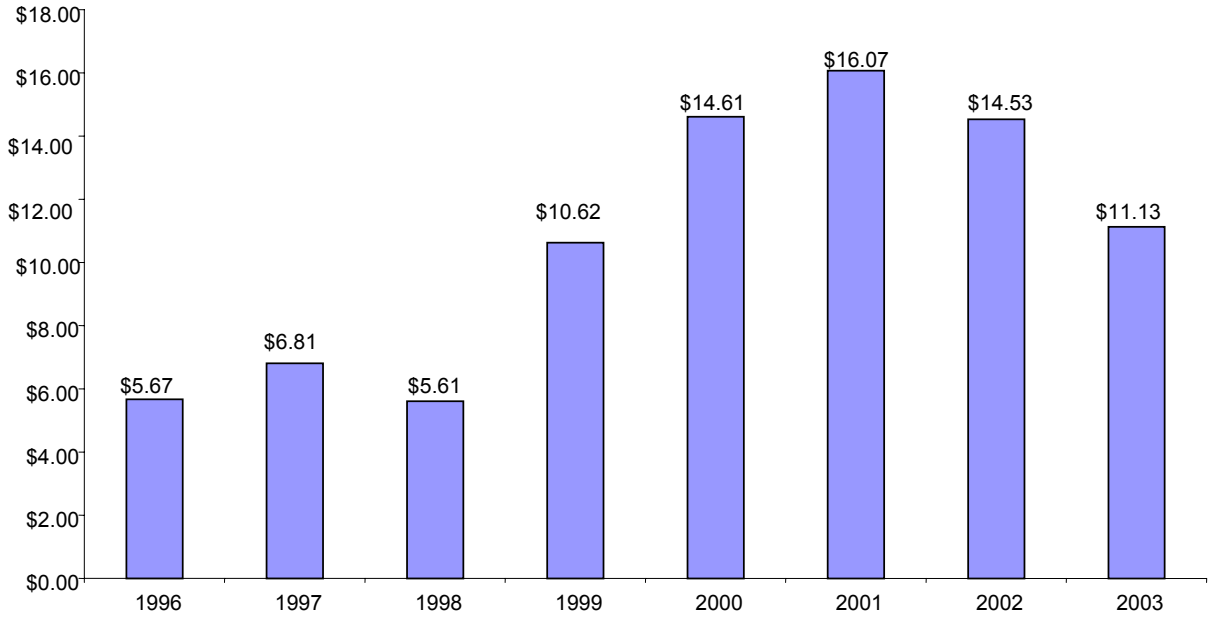
In addition, while many competitive local exchange carriers spawned by the 1996 Act have disappeared, merged, or struggle for survival, cable operators are progressively fulfilling their promise to give consumers a full-scale, facilities-based alternative to their local telephone company. Using their upgraded broadband facilities, cable operators currently provide circuit-switched telephone service to approximately 2.5 million residential customers. And, as described earlier, many companies have introduced trials or launches of Internet-based VoIP service. With their own infrastructure in place and an efficient new technology in hand, cable operators are poised to become long-term competitors in the provision of local telephony services.

All of these new services – digital tiers of programming, high-speed Internet access, and telephone service – are new, and optional, services for consumers. New programming is being provided on optional digital tiers or on an "on demand" basis. The Internet and telephone services provided by cable operators are stand-alone services. They are available as separate options to cable subscribers, and, in fact, they are available even to consumers who choose not to purchase the cable operator's video programming services.

The year-by-year cost for cable's transformation from a provider of analog television to a provider of multiple new digital services is shown below.

[103] "High-Speed Internet Growth Slowing Down?", Leichtman Research Group, August 7, 2003, at 2.

CABLE'S CAPITAL EXPENDITURES
(in $ billion)



Source: 1998-2003: Kagan World Media, Broadband Cable Financial Databook 2003, p. 142; 1996-97: Kagan World Media, Cable TV Financial Databook, p. 150.

By year-end 2002, more than 98 million homes were passed by cable plant with a capacity of at least 550 MHz – and 79 million homes were passed by systems with 750 MHz or higher capacity.[104] By the end of last year, more than 86 million households were passed by activated two-way plant, allowing for the deployment of interactive, cable modem and telephone services and that number is projected to increase to 95.4 million homes by year-end 2003.[105]

These upgrades have positioned cable well to compete with DBS and other video providers.

The following discussion details cable's actions on almost every front to meet the challenges of a highly competitive communications marketplace.

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[104] Kagan World Media, a Media Central/Primedia Company, Cable TV Investor Deals & Finance, June 30, 2003 at 4.

[105] Id.

B. Cable Has Aggressively Deployed HDTV Nationwide Over the Last Year to Meet Customer Demand and Advance the Transition to Digital Television

The satellite and cable industries' move toward high definition television (HDTV) over the past year is a hallmark of the intensely competitive video marketplace. While cable companies' plans to introduce HDTV's better picture and sound quality in their systems were well underway, the technology became a bigger priority for the industry eighteen months ago when a number of cable executives attended the Consumer Electronics industry show in Las Vegas. They saw that most of the displays featuring HDTV were using DBS as a signal source. This prompted many companies to accelerate their roll-out of HDTV programming in an effort to keep satellite from gaining a competitive edge.[106]

Now analysts and industry observers alike recognize that the race is on between cable and DBS for the wide-scale adoption of HDTV technology in the home.[107] According to the Yankee Group, "rapid deployment of HDTV by cable operators and growing availability of HD programming will drive HDTV signals to more than 41.6 million homes (nearly 40 percent of the U.S. total) by year-end 2007."[108] And the technology will be a "competitive differentiator" for all types of programming.[109] As described by one observer:

> Satellite has gained about 20% of the U.S. market for pay TV, growing faster than many experts originally predicted. Now, it is poised to boost its growth further thanks to the increasing number of consumers buying high definition sets, which promise much sharper pictures but need special signals to reach their potential. . . .

[106] "Cable Firms Get Ready for Spread of HDTV", Investor's Business Daily, April 1, 2003.

[107] "HDTV is redefining how cable systems attract customers", USA Today, April 3, 2003; "Cable Firms Get Ready for Spread of HDTV", Investor's Business Daily, April 1, 2003.

[108] "HDTV Finally Overcomes Industry Inertia, Set For Rapid Growth", Report by Adi Kishore, The Yankee Group, (April 14, 2003); News Release, May 12, 2003.

[109] Id.

> Cable executives acknowledge that satellite has taken an early lead in HDTV partly because cable companies have focused on other products like high-speed Internet hook-ups. . . . But cable is rapidly correcting the imbalance. Cable systems are transmitting high definition signals to more than 55 million cable subscribers, up about 50% from the beginning of the year.[110]

According to many analysts, consumers are increasingly aware of HDTV and, as prices of HDTV sets come down, are more and more willing to pay for the equipment and services.[111]

Operator HD Investment. Cable operators are aggressively deploying HDTV nationwide. Today, over 60 million households are passed by a cable operator offering HDTV, including 83 of the top 100 designated market areas (DMAs) and an additional 39 markets beyond the top 100. And cable systems are carrying the digital signal of 231 unique broadcast stations.

Time Warner Cable has introduced high definition tiers in most of its markets, including premium services such as Showtime and HBO. Among the 50 markets with Time Warner HDTV service are New York, New York, Houston, Texas, Raleigh, North Carolina, Orlando, Florida and Minneapolis, Minnesota.

Comcast offers five or more HDTV channels to its customers in such markets as, Los Angeles, California, Chicago, Illinois, Philadelphia, Pennsylvania, San Francisco, California, the Washington, D.C. metro area, Detroit, Michigan, and Atlanta, Georgia. It will launch HDTV service in Denver shortly. Comcast also has partnered with Best Buy to sell digital-ready HDTV sets and Comcast Digital Cable in several major U.S. cities.

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[110] "In HDTV Race, Satellite Leads Cable Systems", The Wall Street Journal, July 24, 2003; "HDTV Is Redefining how cable systems attract customers", USA Today, April 3, 2003.

[111] "HDTV Attracting a Growing Audience", Leichtman Research Group, June 6, 2003; HDTV Study, Dove Consulting, April 2003; "High Awareness Bodes Well for HDTV", Josh Bernoff with Gillian DeMoulin, Forrester, December 9, 2002.

Since 2002, Cox Communications has offered HDTV to its customers in Omaha, Nebraska, Las Vegas, Nevada, Phoenix, Arizona, Fairfax County, Virginia, and San Diego, California. It recently added Cleveland, Ohio and Oklahoma City, Oklahoma. Cablevision began offering HDTV set top boxes earlier this year to most of its New York-area digital customers with HD-ready televisions. In addition to offering HD content on premium, sports and broadcast channels, the company recently launched HD VOD, which makes select movies available to Cablevision HD customers for $6.95 a title.[112] Charter Communications currently offers HDTV service in 14 markets.

In addition to major metropolitan areas, cable operators are providing HDTV in a variety of mid-sized and smaller or rural markets. Mid-size markets include Austin, Texas, Portland, Maine, Raleigh-Durham, North Carolina, Omaha, Nebraska, Green Bay, Wisconsin, Las Vegas, Nevada, Little Rock, Arkansas, Toledo, Ohio, Louisville, Kentucky, Indianapolis, Indiana, Fresno, California and Columbus, Ohio. Smaller or rural markets include Batavia, New York, Fargo, North Dakota, Palm Desert, California, Sherman, Texas, Waco, Texas, Twin Falls, Idaho, Pittsfield, Massachusetts, Biloxi, Mississippi, New Ulm, Minnesota, Lima, Ohio, Idaho Falls, Idaho, East Cartage, New York, Greenwood, Mississippi and Youngstown, Ohio.

High definition programming offers something new and compelling to consumers who have television sets that can receive it. Research indicates that while consumer awareness of HDTV is growing, many consumers will not purchase a high definition television set until prices decline significantly. Nevertheless, the cable industry has committed to carry such high

[112] "Cablevision 1st Out of the Gate with HD VOD", CableFax Daily, August 29, 2003.

definition programming even during these early stages of the digital transition in order to encourage cable subscribers to purchase digital television sets. Broadcast programming is a significant element of cable operators' current and planned high definition offerings to subscribers.

Cable networks are making significant investments in high-definition programming and are already the leading producers of HD. Their programming plays a major role in cable operators' high definition offerings and in promoting the DTV transition.

Cable Network HD Investment. Some of the most popular cable programming genres – including movies and sports – are now being offered in high definition.[113] Many cable networks are offering HD for all – or virtually all – of their programming day.

For example, HBO and Showtime have been at the forefront of offering a wide variety of their popular programming in HD. Seventy percent of HBO's programming is provided in HD.[114] Showtime provides most original movies in HD, as well as many of its original series.[115] Discovery HD Theater features 24 hours daily of Discovery's most popular programming in high definition. Discovery plans to spend $65 million over five years on Atlas HD, a series of 30 two-hour, high definition documentary specials on countries around the world. A&E Television Networks, which includes A&E, The History Channel, The Biography Channel, and History Channel International, is producing original series and specials in HD. On July 31, 2003, Bravo

[113] "HDTV's Acceptance Picks Up Pace As Prices Drop and Networks Sign On", The New York Times, March 31, 2003.

[114] Id.

[115] "Showtime Boosts HDTV Offerings", Multichannel News Online, February 10, 2003.

launched Bravo HD+, featuring symphonic concerts, ballet, theater, and opera in high definition.[116] Starz Encore is also introducing a new HDTV channel.[117]

HD sports offerings on cable – which some consider to be "perhaps the technology's most compelling application"[118] – also are gaining momentum. In March of this year, ESPN launched a full-time HD channel, which "plans to carry 100 professional baseball, hockey and football games in the next year in the HDTV format, while 'upconverting' all of ESPN's other programming to the technical equivalent of HDTV."[119] In 2004, NCAA basketball will also be aired in HDTV on ESPN. Madison Square Garden Network offers many of the New York teams' home games in high definition. Comcast SportsNet in early 2003 began offering more than 200 professional sporting events annually in HD. FoxSportsNet is producing more than 150 games per year in HD. This year, USA Network carried both the US Masters (Golf) Tournament and the US Open (Tennis) Tournament in HD.[120]

Movies are another popular category of cable HD programming. In addition to HBO and Showtime's HD movie offerings, Cinemax HD is scheduled to make its debut later this year.[121] In 2003, iN DEMAND, which has traditionally supplied video-on-demand programming and

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[116] See e.g. "High-Definition Television: It will get there, eventually", USA Today, August 19, 2003.

[117] "Starz to launch high-definition channels", Denver Business Journal, June 9, 2003

[118] "HDTV's Acceptance Picks Up Pace as Prices Drop and Networks Sign On", The New York Times, March 31, 2003.

[119] Id.

[120] "Masters to be shown in High Definition on Time Warner Cable", Time Warner Cable Columbus Division Press release, April 10, 2003; "U.S. Open goes HD on USA", Broadcasting & Cable, August 11, 2003.

[121] "Networks Take Varied HD Path", Multichannel News, December 9, 2002.

recently began rolling out certain movies in HD, will soon launch two HD channels (iNHD and iNHD2) featuring movies, sports and general entertainment.[122]

Thus, the cable industry has made significant progress in providing HDTV and will continue to roll out HD in more markets. All signs are that interest in HD among cable subscribers is growing and will continue to grow as the amount and variety of HD programming expands and prices on HD sets fall.[123]

As a result of the Commission's approval of rules to implement the landmark agreement entered into in December 2002 between major consumer electronics companies and top cable MSOs, consumers will be able to buy unidirectional digital TVs that connect to digital cable without a set-top box, and enjoy easy access to HDTV services offered by cable operators. The agreement sets the stage for a national "plug and play" standard between digital television products and digital cable systems, and will help speed the transition from analog to digital television. The parties continue discussions on specifications for "cable ready" interactive DTV sets.[124]

What does cable's investment in high definition television mean? It means that cable operators view DBS as a formidable, neck-and-neck competitor, and that cable must invest to stay ahead of the competition. Analysts view the market similarly. So should the Commission.

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[122] "iN DEMAND to launch second 24/7 linear High-Definition Television Channel", iN DEMAND Press Release, June 9, 2003; "iN DEMAND and CSTV: College Sports Television Kickoff High Def Partnership with College Football in September", Press Release, May 26, 2003.

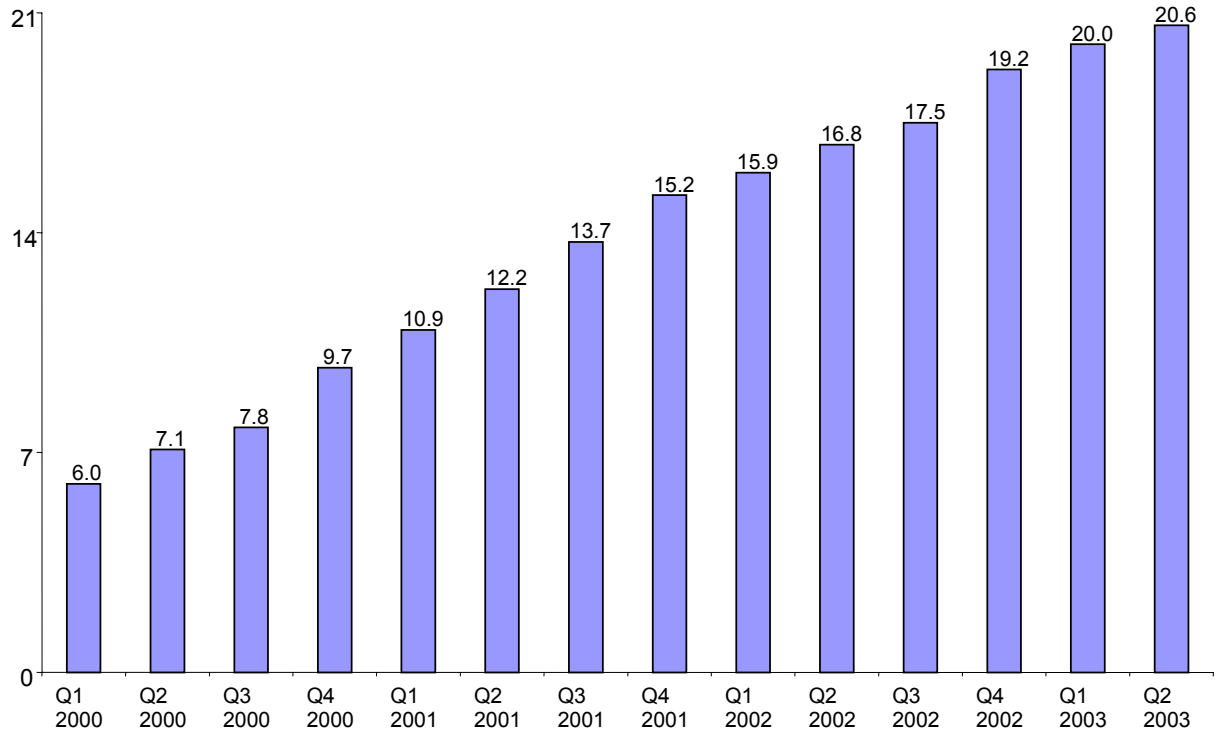
[123] The Consumer Electronics Association reports that factory-to-dealer sales of DTV products in 2002 "totaled 2,487,502 units and $4,210,151,531" – an increase of 73% in units and 61% in dollars over the previous year's figures. CEA Press Release, January 27, 2003, www.ce.org/press_room/press_release_detail.asp?id=10155. See also "HDTV – At What Price", CTAM Pulse, www.ctam.com (hereinafter "CTAM Pulse").

[124] At the same time, major television set and set-top box manufacturers have signed the CableLabs PHILA ("POD-Host Interface License Agreement"), providing another path for them to build digital cable ready products.

C. Digital Cable Is Now Available to Over 90 Percent of Cable Customers, and Video-on-Demand and Interactive Services Are Growing

Digital cable service is now available to over 90 percent of cable customers and more than 25 percent of customers, approximately 20 million, currently take the service.

Digital Cable Customer Growth
(In Millions)



Source: NCTA Research based on company data.

Cable programmers responded to the availability of additional digital capacity by creating new programming services, ranging from A & E's Biography Channel to BET Gospel to the Tennis Channel. Spanish language programming aimed at Hispanic children debuted on Sorpresa! Time Warner Cable launched DTV en Espanol, a tier of 15 Spanish language networks, and Cablevision launched a 30-channel Hispanic digital service (iO en Espanol) that can be purchased on top of broadcast basic for a total price under $30. Mag Rack, a new video-on-demand service, offers customers a broad range of special interest video magazines, such as Classic Cars, Bridal, Photography Close-Up, Club Vegetarian and Maximum Science. This digital product is currently available on Cablevision's iO digital service and is being marketed nationwide to other distributors.

Cable operators are also exploring and refining interactive television (ITV) as a means to provide consumers with greater control of their viewing experience. The various ITV services that are being deployed include digital video recorders (DVRs), video-on-demand, interactive program guides, enhanced TV services, TV-based web access and local content.

Interactive program guides are well established with all digital cable customers. Most of the major MSOs, including Cablevision, Charter, Comcast, Cox, Insight, Mediacom and Time Warner Cable, are testing or actively deploying VOD services. The Yankee Group estimated that by the end of 2002 about seven million homes in the U.S. had access to VOD, up from three million at the end of 2001.[125] The following are examples of on-going interactive trials and services:

[125] "Video On Demand Is Finally Taking Hold", The New Times, November 25, 2002.

- In 2003, Cox introduced DVR service in Northern Virginia. Comcast recently announced plans to conduct a DVR trail in Philadelphia with Samsung and Ucentric. Time Warner Cable now offers DVR service in 24 of its 31 cable divisions.[126]

- Charter Communications' interactive service, Charter i-Channels, is currently available to more than 650,000 Charter Digital Cable customers. Developed with Digeo and introduced in 2002, Charter i-Channels has grown into one of the nation's most widely deployed interactive television offerings. The most recent channel to be deployed is i-Games, joining other channels including News, Weather, Sports, Entertainment, Shopping and Money.[127]

- VOD is available to Time Warner Cable customers in 32 of the company's 34 divisions.[128] Time Warner's launch includes New York City, the company's biggest market with 1.2 million customers.[129] Other communities where Time Warner Cable offers VOD include Kansas City, MO; Raleigh, NC; parts of Maine; and San Antonio and Waco, TX. The company is also rolling out subscription VOD for its premium channels, which is available for a monthly fee.[130]

- Mediacom launched VOD service in Des Moines, IA, and in the Quad Cities area of Iowa and Illinois in fall 2002.[131]

- Comcast launched On Demand in January, 2003, in Philadelphia, PA and New Jersey at no additional charge above the digital cable price.[132]

- Insight Communications launched Rainbow Media Holdings' Mag Rack, a unique VOD service, in October 2002. Insight was the first MSO to launch the product nationally, giving its digital customers the only service designed for and exclusively available via VOD. The service provides customers with

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[126] Id.

[127] "Digeo, Charter Launch Most Widely Deployed Interactive Games Channel in North America", Charter Communications Press Release November 11, 2002.

[128] CableWorld, January 13, 2003, p. 14.

[129] "Video On Demand Is Finally Taking Hold", The New York Times, November 25, 2002.

[130] Time Warner Cable web site, Products and Services to Meet Your Needs (http://www.timewarnercable.com/dispatcher/aboutUs?docNickName=ProdServ2Meet).

[131] Multichannel News, Broadband Databook, December 2002, p.12A.

[132] "Tivo Beware: Comcast Launches 'On Demand' in Philadelphia", Cable Program Investor, Kagan, January 17, 2003.

numerous digital magazines, including *Aviator's World*, *Celebrating Dogs*, and *Inside Weddings*.[133]

- Cablevision Systems Corp., in July 2002, introduced ESPN Today, an interactive channel on its iO suite of interactive services, offering customers on-demand access to video clips and scores, news and statistics. Cablevision also offers MSG Game Director. The feature allows fans to control camera angles during home New York Mets games by selecting from various live feeds.[134] The iO services also include video on demand, digital programming, digital music, select niche video content from Mag Rack, interactive television, a "click-to-view" programming guide and e-mail service through the television.[135] Cablevision introduced its iO service in September 2001, and about 4.3 million homes will have access to iO by summer 2003. The service recently won an Emmy for interactive television.[136]

- Cox Communications provides avid sports fans with Sports iN DEMAND, which consists of optional sports packages such as MLB Extra Innings, NBA League Pass and ESPN Game Plan.[137]

- In late 2002, Microsoft announced agreements with Comcast, Time Warner, Charter and Cox to offer its X-Box Live online video game service to cable customers.

D. Cable's Widespread Roll-Out of High Speed Internet Service Nationwide Has Stimulated the Market for Broadband Services

Cable companies transformed the residential Internet experience by inaugurating broadband Internet access service to the home in the late 1990's. Cable's superior bandwidth when compared to conventional telephone lines enables significantly faster transmission speeds. Cable's service is "always on," thereby eliminating the delay dial-up subscribers encounter each time they initiate service. Moreover, cable's service operates independently of the telephone

[133] "Rainbow's Mag Rack Launches on Insight Digital September 16", Insight Communications Press Release, October 2, 2002.

[134] "Cablevision Offers iO: Interactive Optimum Customers More Baseball Action and Control Beginning Opening Day", Cablevision Press Release, April 1, 2002.

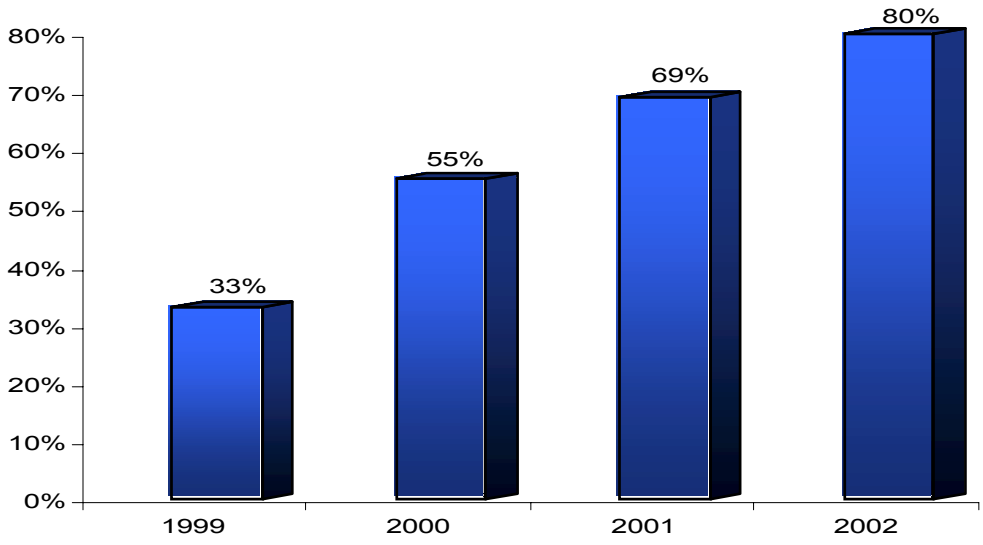
[135] "Cablevision Introduces iO: Interactive Optimum, Its Suite of New Digital Services in Western Long Island", Cablevision Press Release, September 27, 2001.

[136] "Good News From Cox, Cablevision", Multichannel News Day, December 13, 2002.

connection, which enables users to search the web or send e-mail while simultaneously using, or maintaining access to, telephone service without obtaining a second telephone line. Consumers also benefit by the cable industry's development of standards to make interoperable, non-proprietary cable modems available at retail.

In the last year, cable companies have continued to invest in new facilities capable of delivering broadband Internet access services to residential customers. By one estimate, cable systems now offer broadband Internet access service to more than 89 million subscribers.[138]

CABLE'S BROADBAND AVAILABILITY



Source: Morgan Stanley Report

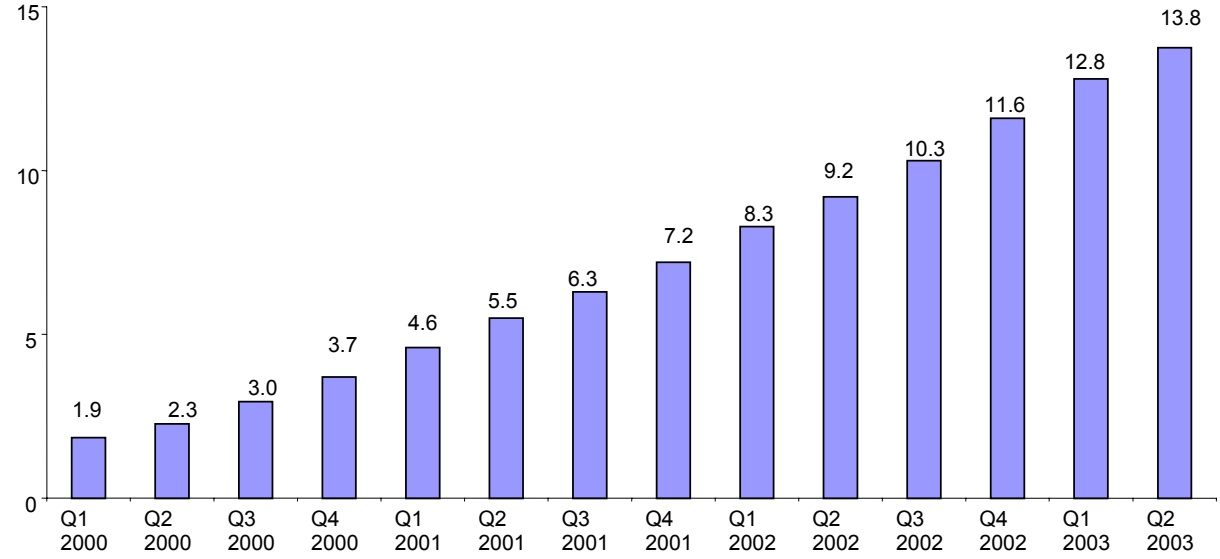
[137] Cox Communications web site (http://www.cox.com/digitalcable).

[138] "Cable and Satellite: The Copernicus Theorem", Morgan Stanley, July 2, 2003, at 38 ("Morgan Stanley Report").

Before the end of 2004, cable's broadband service is expected to be offered to more than 100 million subscribers.[139] The substantial completion of cable's broadband upgrade to enable the provision of broadband Internet access to residential customers is now within sight.

The Commission's most recent report demonstrates that consumers are accepting cable's broadband service at a rapid rate. For the full year ending December 31, 2002, high-speed cable modem connections grew 61 percent, from 7.1 million to 11.4 million lines.[140] An independent analysis by Morgan Stanley substantially confirms this trend. According to the most recent Morgan Stanley Report, the number of cable broadband subscribers was 8.74 million as of June 30, 2002.[141] By June 30, 2003, Morgan Stanley predicted cable modem subscribership would have grown more than 52 percent, to 13.362 million.[142] These projections were borne out as NCTA estimates that cable modem customers numbered 13.8 million by June 2003.

Cable Modem Customer Growth
(In Millions)



[139] Id.

[140] "Federal Communications Commission Releases Data on High-Speed Services for Internet Access", June 10, 2003, at 2 ("FCC High-Speed Data Release").

[141] Morgan Stanley Report at 38.

[142] Id.

Source: NCTA Research based on company data.

The growth in cable modem subscribership has been particularly noteworthy because it has occurred in the face of stiff competition from DSL and the still dominant narrowband dial-up services. DSL providers' belated responses to cable's superior service offering have included price cuts, marketing deals and bundled service offerings.[143] These efforts have met with some success. The Commission reported last June that as of December 31, 2002, DSL lines (primarily telco-provided, but also non-telco-provided), increased by 64 percent, from 3.9 million to 6.5 over the previous year.[144]

The Morgan Stanley Report substantially confirms the trend of the data presented by the Commission. It states that, as of June 30, 2002, the number of total DSL access lines stood at approximately 4.698 million lines.[145] The Morgan Stanley Report estimates that, as of June 30, 2003, total DSL access line penetration had reached 7.033 million lines, a gain of more than 49 percent from the previous year.[146]

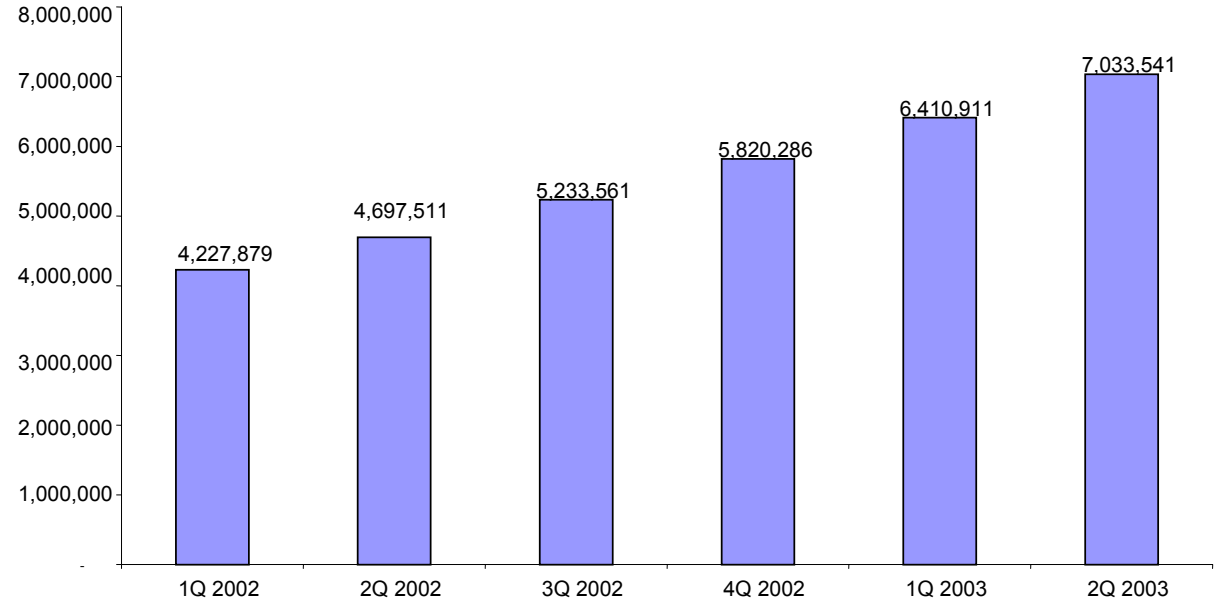
DSL Growth

[143] See discussion in Part IB.

[144] "FCC Releases Data on High-Speed Services for Internet Access", June 10, 2003, at 2.

[145] Morgan Stanley Report at 43.

[146] Id.



Source: Morgan Stanley Report at 43.

In addition to the leading providers, broadband alternatives are also available. According to the Commission's most recent report, as of December 2002 there were 1.216 million "Other Wireline" subscribers, 548,123 "Fiber" subscribers, and 65,929 Satellite or Fixed Wireless Subscribers. In the future, additional facilities-based competition is anticipated from Broadband over Powerline systems.[147]

Despite the substantial growth in broadband Internet subscriptions in recent years, most residential Internet customers continue to subscribe to dial-up service. According to the Morgan Stanley Report, estimated dial-up Internet subscribers as of the end of the second quarter of 2003 were 46,333,145.[148] This compares to total broadband subscriptions of 20,395,837. Morgan Stanley projects that as a result of the estimated 7,607,555 subscriptions by purchasers of both broadband and dial-up service, total residential (broadband and dial-up) subscribers as of

[147] Inquiring Regarding Carrier Current Systems, including Broadband over Power Line Systems, ET Docket No. 03-104, FCC 03-100, rel. April 28, 2003.

[148] Morgan Stanley Report at 43.

the end of the second quarter 2003 were 59,121,427.[149] It is particularly noteworthy that, if the Morgan Stanley estimates prove correct, the second quarter of 2003 will be the first period during which the number of dial-up subscriptions declined.[150] This trend strongly suggests that, even though broadband services are generally priced at rates which are higher than dial-up services, increasing numbers of subscribers are seeing greater value in the broadband service offerings.

Cable operators continue to deploy new online services that take advantage of cable high-speed bandwidth including local and national programming and other educational and informational resources.

In sum: Cable's commitment to digital, on demand, and data services arises from the competitive environment in which it finds itself in its core video business. Challenged by two nationally marketed competitors that have no marginal infrastructure costs to serve additional customers, cable must – and does – develop its own competitive advantages.

E. Cable Offers State-of-the-Art Customer Service with 24-Hour Call Centers and Related Services

One of the major benefits to consumers of an increasingly competitive video marketplace is a greater emphasis on all aspects of customer service – from installations and technical support to responding to service inquiries and problems to billing, promotions and ordering new products and services. With the advent of new digital services and customer loyalty at stake in a highly competitive video marketplace, cable companies have stepped up their customer service commitments and raised their customer service standards in an effort to hold on to existing customers and bring in new ones.

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[149] Id.

[150] Id.

Cox, for example, has a long history of high customer approval ratings, but over the last year it has taken steps to stay ahead of its competitors by implementing one telephone system, one billing system and adopting company-wide standards for its customer service representatives (CSRs) and back office personnel.[151] In addition to utilizing 24-hour call centers, it has expanded its customer service options to include viewing and paying bills on-line, ordering services on-line, and using e-mail with a 24-hour response time. Its website also provides substantial information to its subscribers for self-directed support. As Cox and other cable companies add new services, personnel training has become more critical to maintaining high customer service. The average Cox employee, for example, spends 80 hours a year in training.[152]

In the face of stiff satellite competition and subscriber churn in Los Angeles, Time Warner Cable rolled out its "Because We Care" program, aimed at instilling broad customer loyalty and targeted to particular customers with service problems. As described in press reports, customers with a service problem receive a follow-up call from an employee in the customer retention group within 24 hours of the appointment. If the customer indicates that the problem persists, the employee schedules an immediate follow-up visit. The company also has adopted an "anniversary program," which recognizes a customer's time with Time Warner and thanks them for their patronage, accompanied by a coupon for a complimentary video on demand movie.[153] Overall, Time Warner has received positive reactions from customers and

[151] "Follow the Leader", Cable World, December 2, 2002. Cox was recently ranked number one in J.D. Power and Associates annual residential telephone customer satisfaction survey. "Cox Wins J.D. Power Phone Honor", Multichannel News, July 15, 2003.

[152] Id.

[153] "1st Place: Time Warner L.A.'s Caring Campaign", Multichannel News, July 21, 2003.

seen a 4.5% decrease in subscriber churn over 2002 levels, and a 22% decrease in the number of customers with service problems disconnecting within 90 days of their service call.[154]

Time Warner's San Antonio, Texas system operates seven customer service centers six days a week, along with a 24-hour call center. With approximately 40% of the San Antonio system's customers paying by cash, the ready availability of walk-in centers gives this system "a bit of an upside in terms of competition."[155] Time Warner Cable's Austin, Texas system recently went after new customers by offering "Instant Install Weekend," i.e. same-day cable installs with two-hour appointment windows.[156]

Comcast has been opening new customer service call centers in the communities it serves across the country. In Harrisburg, Pennsylvania, for example, the company opened a new 20,000 square-foot customer service facility, including a payment center and state-of-the-art, hands-on demonstration area. "Kiosks loaded with the latest digital product offerings, including HSD, HD and VOD, are at the ready to provide visitors with a more immediate, user-friendly appreciation of how each application works."[157] Comcast also opened a new customer service call center specifically for its Connecticut subscribers, whose calls were previously answered by personnel in Massachusetts and Florida.[158] Comcast recently invested $17 million in a new state-of-the-art call center and facilities in the San Francisco Bay area, including a one-month training program

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[154] Id.

[155] "A Latino Market That's More In the Main", Cable World, October 14, 2002, quoting Lori Willis, director of customer care operations.

[156] CableFax, April 17, 2003. In response to competition from Verizon's DSL service, Comcast offers customers in the Washington, D.C. and Richmond, Va. Systems an "Instant Install" option. If a customer calls before 5 pm on a given business day to order high speed Internet service, they can have their new cable modem installed that evening. "Comcast Data Maneuver: Instant Install", Multichannel News, August 18, 2003.

[157] "A Sleepy City Where Hopes Run High", Cable World, August 11, 2003, at 31.

[158] "Comcast to Create Call Center in State", Hartford Courant, May 31, 2003.

for center personnel.[159] Comcast has opened centers in Henrico County, Virginia and Irving, Texas with the objective of being as close to its customers as possible by having calls handled by people who live and work in the area.[160] As part of new Hispanic programming initiatives, the company expanded its Spanish-language customer service capabilities to include dedicated bilingual call-center representatives and customer welcome kits.[161]

Another example of customer service ingenuity is Adelphia Communications' Ambassador program in its Southern California region. Under the program, cable system supervisors, and managers up to the senior vice president make an average of three cold calls a week to subscribers to ask them if they are satisfied with the service and to address any complaints. Adelphia employees have already made about 10,000 calls to customers in the Southern California communities it serves.[162]

The foregoing is just a sampling of the customer service initiatives undertaken by cable companies to respond to their customers' needs, to differentiate their product, and to localize their appeal in a fiercely competitive video marketplace.

IV. COMPETITION HAS PRODUCED HIGH QUALITY, DIVERSITY AND LOCALISM IN CABLE PROGRAMMING

As cable operators have sought to compete with DBS and others by expanding the number of channels of programming on their systems and investing in higher quality programming, the cable programming marketplace has itself become vibrantly competitive.

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[159] "New Morgan Hill, Calif., Comcast Customer Center to Bring 500 Jobs", The Dispatch, April 23, 2003.

[160] "Call Center Planned", Richmond Times Dispatch, December 15, 2002; "Comcast is opening call center in Irving", The Dallas Morning News, June 12, 2003.

[161] "Comcast Launches New Hispanic Programming Packages", Press Release, May 5, 2003; Operators Sprinkle Hispanic Packages with Foreign Nets", Cable World, March 31, 2003; "U.S. Latin Channels Blaze Cable Trail", Multichannel News, June 9, 2003.

[162] "Adelphia Ambassador Execs Call on L.A. Subs", Multichannel News, August 4, 2003.

Through the years, as channel capacity on cable systems grew from the 12- and 36-channel systems of only a couple of decades ago to the hundreds of channels now available on upgraded, digital-ready systems, it has always been the case that the number of program services seeking access to such systems exceeded available capacity. And that's still the case, causing networks to invest in higher quality programming or to differentiate their services with unique programming.

But one thing that has significantly changed since the Commission began these inquiries into video competition is that vertical integration – ownership of program networks by cable operators – has substantially diminished. In 1992, half of all cable networks were vertically integrated. Since then, the percentage of programming networks in which cable operators collectively have any ownership interest has dropped sharply to 21%. No single cable operator has a financial interest in more than 13% of the more than 300 national program networks identified in the Federal Communications Commission's most recent report on competition in the video marketplace.

Even in 1992, most of each networks' customers – even the customers of vertically integrated networks – were cable operators that did not have an interest in that particular network. Today, for most cable systems, the number of channels occupied by networks vertically integrated with the cable system is minuscule. By contrast, the number of cable programming networks owned by broadcast station owners has dramatically increased. For example, in 1997, CBS, Disney, GE and News Corp. combined had ownership interest in 6 of the 25 most widely carried cable networks (approximately 24%).[163] In 2003, Disney, GE, News Corp. and Viacom combined have an ownership interest in 14 of the 25 most widely carried

[163] Network Census data in Cable TV Programming, Paul Kagan & Associates, August 31, 1997, at 8.

cable networks (approximately 56%).[164] This trend toward increased integration of broadcast station owners and cable programming services continues with the recently announced merger plans of NBC and Vivendi Universal Entertainment.[165] In addition to the NBC Television Network, the merged company would have a portfolio of cable networks (including USA Network, Sci-Fi Channel, CNBC, MSNBC, Bravo), Universal Pictures and Universal Television.

Not all cable programming consists of nationally distributed satellite networks. In order to differentiate its service offering from DBS and to fill voids in local broadcast coverage of news and public affairs, cable has become the leading 24/7 source of local programming.

Since its earliest days, cable systems have been a unique source of community-oriented programming. Even before the advent and proliferation of satellite-delivered program networks, cable operators provided "local origination" channels – and they still do. In many cases, these channels target cable franchise areas within larger metropolitan areas, providing programming more specifically tailored to those communities than even the local programming provided by area broadcasters.

Now, in addition, many cable systems also provide local or regional news channels, as well as regional sports channels. These channels provide high quality local programming of the sort that used to be the sole domain of local broadcasters – and, unlike broadcast stations, they provide it all day long. For example, Weatherscan, a 24-hour, all-local weather information network developed by the Weather Channel, is carried on Time Warner, Cox, Comcast and Charter cable systems. There are now more than 35 local cable news and information channels

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[164] Economics of Basic Cable Networks 2003, Kagan World Media, September 2002, at 64. Cable MSOs combined have an ownership interest in 9 of the 25 most widely carried cable networks.

[165] "Vivendi Universal and General Electric Intend to merge NBC and Vivendi Universal Entertainment", Press Release, September 2, 2003; "It's Official: Vivendi, GE Make Deal", The Wall Street Journal, September 3, 2003.

across the country, most providing round-the-clock coverage, including Arizona News Channel, Bay News 9, Central Florida News 13, New York 1 News, New England Cable News, News 9 San Antonio, News 14 Carolina, News 24 Houston, News Channel 8 (Washington, D.C. metro area), and News Now 53 (Oklahoma City).

These local and regional networks employ a variety of techniques, including collaboration with other local media, to deliver the latest local news, sports, weather, traffic, public affairs and other information to subscribers. As shown in Appendix C, these networks provide diverse coverage which, in particular areas, include zoned editions particularized to specific portions of the service area, local documentaries, multilingual programming, election night programming, international news from a local perspective, local history segments, and information on locally-available employment opportunities. [166]

Public affairs programming has seen a resurgence on cable systems across America. In addition to C-SPAN's gavel-to-gavel coverage of the U.S. House of Representatives and the U.S. Senate and other public affairs programming on its three networks, a variety of state and local public affairs networks have sprung up. California Channel provides gavel-to-gavel coverage of the California legislature, and Michigan Government Television, the New Jersey Cable Telecommunications Association and the Pennsylvania Cable Network cover their respective state government proceedings.[167]

Cable's local origination programming covers the range of community-oriented interests, from politics and news to education and sports to community-wide events and particular cultural and ethnic activities. Here are just a few examples. Cox 4 in Baton Rouge, Louisiana highlights

[166] See Appendix C, Local and Regional Cable News and Information Channels.

[167] See Appendix D on Public Affairs Cable Networks. For a more complete list and information on other channels providing coverage of state government proceedings, see www.tvw.org/resources.

the success of area schools on its program, InSchool. Insight operates a 24-hour educational access channel in Covington, Kentucky. Adelphia worked with the national PTA to put together local programming for parents and teachers on helping children deal with the September 11th attacks. Armstrong's Orrville, Ohio system covers many of its local secondary and elementary school events. Susquehanna Communications has produced programming on such topics as disabilities, breast cancer awareness, neighborhood revitalization, and home improvement. Time Warner's systems have covered talent shows, graduation ceremonies, local awards programs and produced shows featuring local teens and law enforcement personnel. Comcast offers, for example, a variety of locally originated programming aimed at diverse audiences, including the Filipino, Hispanic and African American community. This is just a smattering of the community initiatives and local programming – many of which have received national and regional recognition – available every day on local cable systems.

V. CABLE AVAILABILITY AND PENETRATION DO NOT MEET THE "70/70" TEST OF SECTION 612(G)

The Commission has noted that "Section 612(g) of the Communications Act provides that at such time as cable systems with 36 or more activated channels are available to 70% of households within the United States and are subscribed to by 70% of those households, the Commission may promulgate any additional rules necessary to provide diversity of information sources."[168] It asks whether those benchmarks have been met and "how the requirements of this provision should be met."[169]

The short answer to the first question is that the benchmarks have not been met, and that, in light of the steady growth of new competitors in the marketplace, it seems unlikely that they

[168] Notice, ¶ 3.

[169] Id.

will be met in the foreseeable future. While it is true that cable systems with 36 or more channels are available to far more than 70% of households within the United States, the penetration rate for those systems is only 65.386%.[170]

In any event, it is important to point out that the Commission's authority under Section 612(g) is narrowly circumscribed and applies solely to modifications of the leased access requirements set forth in Section 612 – in particular, the rates for leased access. When Section 612 was enacted in 1984, it contained a requirement that cable operators set aside up to 15 percent of their channels for leased access but set no specific limits on the rates that cable operators could charge for leased access. Operators were required only to impose rates, terms and conditions that were not unreasonable – and there was a statutory presumption that rates, terms and conditions set by the cable operator were reasonable, unless shown by clear and convincing evidence to be unreasonable.

As the legislative history makes clear, Section 612(g) was intended solely to authorize the Commission to regulate the rates, terms and condition of leased access more specifically and more stringently, and to impose additional procedures for resolving leased access disputes, if the 70% benchmarks were met and if such changes were necessary:

> At such time as cable systems with 36 or more activated channels are available (*i.e.*, households that are passed by cable) to 70 percent of households in the country, and as these cable systems are actually subscribed to by 70 percent of those households which have availability to them, the FCC is granted authority to promulgate any additional rules necessary to ensure that leased access channels provide as wide as possible a diversity of information sources to the public. Along these lines, the Commission may develop additional procedures for the resolution of disputes between cable operators and unaffiliated programmers, and may provide rules or new standards for the establishment of rates, terms and conditions of access for such programmers.

[170] Based on analysis of Nielsen Media Research FOCUS data as of August 15, 2003.

> In terms of developing any new regulations relating to the price charged programmers for the commercial use of channel capacity designated under this section, prohibitions contained in 621(c) and 623(a) relating to rate regulations and other regulatory authority do not operate as constraints on the possible options available to the Commission in adopting any new rules. However, the Commission should not see its role as that of a traditional common carrier regulator. In any case, the Commission may not increase the number of channels required to be set aside under this section or preempt any authority expressly granted to franchising authorities under the title.[171]

In the Cable Television Consumer Protection Act of 1992, Congress amended Section 612 to give the Commission immediate authority to impose maximum rates on leased access.[172] In other words, the Commission now already has most of the authority that Section 612 was initially intended to confer on it in the event that the 70-70 threshold was ever met. Nothing in the 1992 Act or in its legislative history purports to expand the limited scope of that prospective grant of authority.

CONCLUSION

Each year since it began these inquiries in 1993, the Commission has reported the incremental changes that have occurred in the video marketplace during the past year. Although the irreversible trend towards a fully competitive marketplace became clear early on, even the most optimistic observer could not have predicted the dramatic developments that have occurred between the first and this tenth inquiry.

From a standing start, two DBS companies now offer consumers a fully competitive alternative to their cable operators nationwide. After a massive upgrade to compete with their new rivals, cable operators provide hundreds of new channels of programming and new ways of watching those services. Digital tiers, HDTV, video-on-demand, personal video recorders –

[171] Report of the Committee on Energy and Commerce, H.R. Rep. 98-934, 98th Cong., 2d Sess. 54 (1984).

such things were unheard of when the Commission began conducting these annual inquiries. Nor were telco-DBS packages or broadband service providers on the communications landscape. Meanwhile, competition has increased not only the quantity but also the quality, diversity and localism of cable programming, enhancing the value of such programming to viewers.

Competition and the deployment of digital facilities has also accelerated the nationwide provision by cable operators and other video service providers of new non-video services barely imagined a decade ago. High-speed Internet access is transforming the way the Internet is used and is fostering the development of new content and applications that could not have existed in a dial-up Internet environment. As the result of new VoIP technology, telephone competition is no longer a mere pipedream of policymakers; it is becoming a reality.

The Commission is right to treat this year's report as a landmark. It remains appropriate, of course, for the Commission to report the incremental developments of the past year, which once again reflect all the indicia of a fully competitive marketplace. But it's also appropriate, in this tenth report, to take stock of the remarkable developments of the past decade. It's time focus not only on the successful development of competition in the marketplace but also the fruits of that competition – more services, higher quality, and greatly enhanced value for consumers. ***And it's time for the Commission to declare: the video marketplace is fully competitive.***

Respectfully submitted,

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Loretta P. Polk
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[172] See 47 U.S.C. §532(c)(4).

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APPENDIX A

Assessing Quality-Adjusted Changes in the Real Price of Basic Cable Service

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September 10, 2003

I. Introduction and Summary

Historically, the nominal price for basic cable television service has increased more rapidly than the consumer price index (CPI).[173] This trend, which continues today, has been cited as evidence that cable system operators enjoy market power and that cable subscribers have been hurt by rising subscription fees. While superficially appealing, both claims are analytically incomplete at best. The first ignores the role of costs in the determination of prices and the second ignores the need to consider changes in quality as well as price in determining whether an industry's customers are helped or hurt by changes in its products and prices over time. In addition, the claim that rising prices are evidence of market power embeds a logical fallacy based on a confusion of levels of prices with trends in prices over time.

Recognizing that both prices and changes in service quality must be considered in assessing an industry's performance, the Federal Communications Commission asked in its July 30, 2003 Notice of Inquiry for comments and evidence that would help it better assess the relationship between price and quality for MVPD services. This report responds to that request, focusing on changes in prices and quality for basic cable services from 1997 through 2003. It provides evidence that the quality of services offered cable subscribers has been persistently increasing over time, and suggests price per viewing hour as a measure of quality-adjusted basic cable prices that has significant advantages over unadjusted prices and the price per channel

[173] As used in this report, the term basic cable service, or basic service, refers to two sets of services commonly included under the label of basic. One is the combination of local broadcast stations and public, educational, and government channels that cable operators are required by law to offer as a stand-alone package. The other is the set of commercial networks, most of which sell advertising, that is sold by cable operators in what is called

approach to adjusting for changes in quality that some have advocated in the past. For a representative basic cable subscriber, the real (inflation-adjusted) price paid per hour spent viewing ad-supported basic cable networks in 2003 was just over 15 percent lower than it was in 1997. By this measure, cable viewers appear to be substantially better off now than they were six years ago. Moreover, observed increases in time spent watching basic cable services during this period and evidence that cable subscribers value cable programming more now than in the past suggest that the estimated 15 percent reduction in the real price per hour of cable viewing may substantially understate the true reduction in the quality-adjusted price of basic service that occurred during this period.

Given the persistence of claims that rising nominal prices are evidence of market power, this report also touches briefly on the logical fallacy underlying this claim and the need to consider movements in input costs as factors influencing price trends in consumer goods and services.

II. The Logical Fallacy

The logical fallacy at the heart of the claim that rising prices are evidence of market power is based on a confusion of levels of prices with trends in prices. The nature of this fallacy was fully explained in a paper by Debra Aron that was attached to comments filed with the FCC by NCTA in MB Docket 02-145.[174] Here I simply restate the fairly straightforward intuition underlying her analysis.

At the heart of the fallacy is a confusion of levels of prices with trends in prices. At any point in time, prices will be higher if the firms serving a market have market power than if they

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the expanded basic programming tier. Because most cable subscribers take both tiers of basic service, the term basic is commonly used to refer the combination of the two sets of services.

[174] Statement of Professor Debra J. Aron, attached to NCTA Comments in MB Docket 02-145.

don't. In fact, the ability to set and maintain prices at supra-competitive levels is what we mean by market power. We expect profit-maximizing firms to fully exploit such market power as they have. If they didn't, they wouldn't be maximizing profits. A direct implication of profit-maximization, however, is that by themselves trends in prices over time can tell us nothing about whether the firms serving a market have market power. While prices are influenced by the competitiveness of the markets in which firms sell their products, the effect of a market's competitiveness should always be reflected in its prices. That is, if a firm's market power remains constant over time, the effect of that market power on price should also be constant over time. Market power is simply not predictive of movements in prices.

If the intensity of competition was the only factor influencing prices, changes in a market's prices over time might be interpreted as a reflection of changes in the intensity of competition in that market over time, but this is simply not the case. Price levels are influenced by a number of other factors, including input costs, the level of demand for the market's products, and the quality of its products. Changes in one or more of these factors, all of which may vary independently of the intensity of competition, will influence price levels and changes in price levels over time. The simple observation that prices have changed by itself cannot tell us which of the many factors influencing firms' prices may have changed as well. If firms set prices to maximize their profits on an ongoing basis and prices change from one period to the next, it can only mean that one or more of the many elements in their profit calculus changed between the two periods, nothing more. Additional information would be required to narrow the list of candidates. To infer more from the simple fact that prices change over time, one would have to assume that firms' pricing strategies were driven by objectives other than maximizing profits.

III. How well an industry performs in delivering value to its customers cannot be judged by comparing changes in its prices to the CPI.

For similar reasons, an industry's performance cannot be judged by comparing changes in its prices to changes in the consumer price index (CPI) over time. Roughly speaking, the CPI is an average of the prices for a large number of goods and services included in a hypothetical market basket constructed by the U.S. Bureau of Labor Statistics to reflect representative consumer purchasing habits. The weights of the individual prices in the basket reflect the relative importance of the associated goods and services in household budgets. Because the many factors that influence prices may and do vary among industries, price trends for the various components of the CPI will naturally diverge from the CPI over time. It would be wrong to conclude, however, that industries whose prices rise less rapidly than the CPI are, in some way meaningful for policymaking, performing better than industries whose prices rise more rapidly than the CPI. The following example illustrates this point.

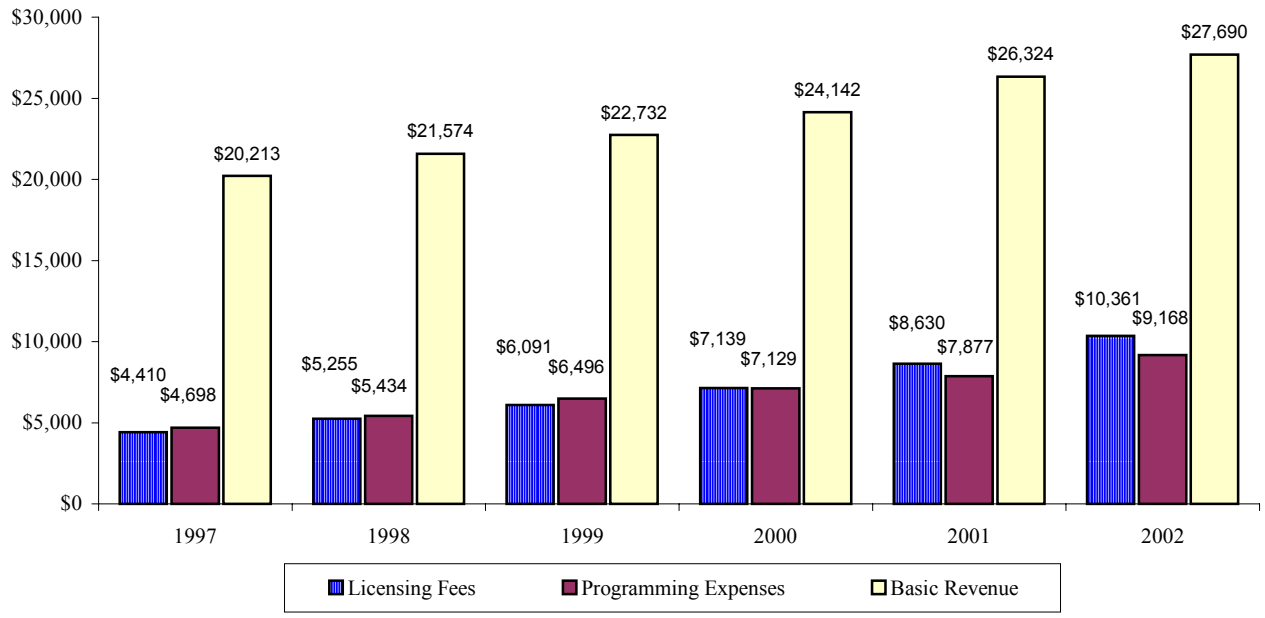
Consider two industries for which input prices are the only price-influencing factors that changes over time. The firms in the first industry are economically efficient in the sense that they deliver the maximum possible value to their customers given the costs of the inputs they utilize to produce their products. Firms in the second industry are not nearly so efficient and they deliver only half the value to their customers that would be possible if they operated as efficiently as firms in the first industry. The prices of the inputs used to produce the first industry's products are increasing considerably more rapidly than the CPI. As a consequence, its prices must also increase more rapidly than the CPI for revenues to keep up with rising costs of production. For reasons totally exogenous to the industry, prices for the second industry's inputs

are falling and as a result the prices charged by firms in this industry are observed to fall relative to the CPI. For policy purposes, how well an industry performs should be judged by how effectively it converts the inputs it employs into value for its customers. By this standard, it is clear that the industry whose prices are increasing relative to the CPI is performing better than the one whose prices are falling because performance in the second industry could be improved. Yet, if judged by changes in their prices relative to the CPI, a naïve policy analysis would come to just the opposite conclusion.

As noted earlier, the price of basic cable service has been rising relative to the CPI. Basic cable prices have not risen more rapidly than have cable systems' payments for the networks that typically account for over one-third of their costs,[175] however, as is evident from Figures 1 and 2.

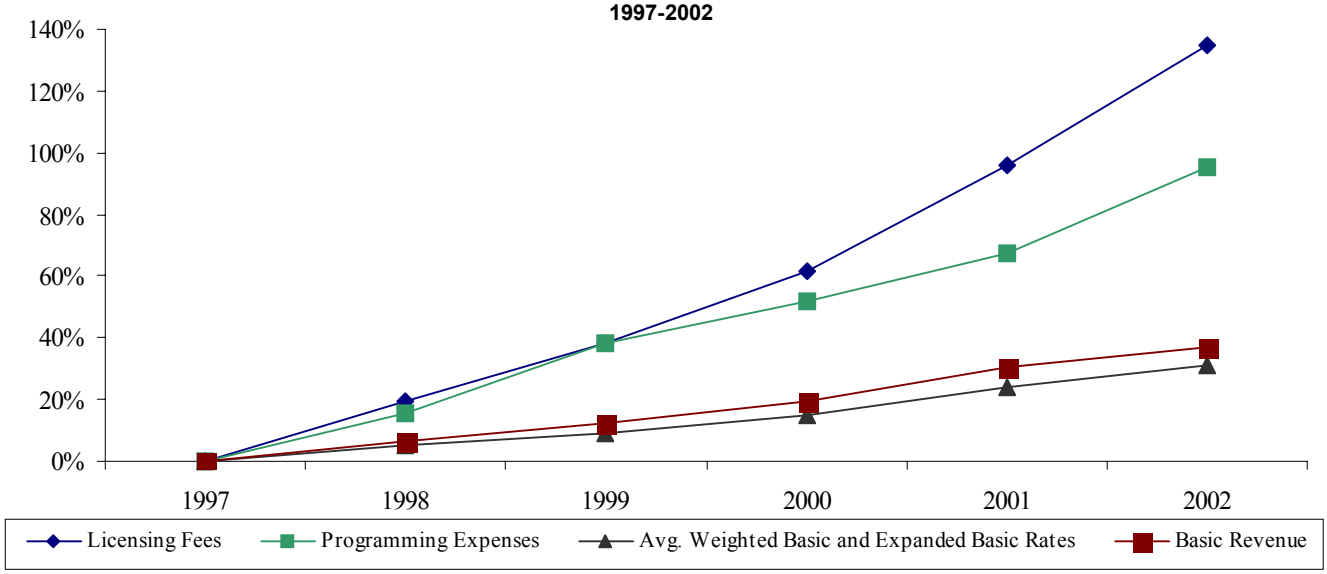
[175] Morgan Stanley, *Pricing Power II: Subscriber Mix is Key to Valuation*, December 9, 2003, p. 16.

Figure 1
Programming Expenses, Licensing Fees, and Basic Revenue ($ mil), 1997 - 2002



Source: Source: Kagan World Media, Economics of Basic Cable Networks 2003, pp 18-19 and Broadband Cable Financial Databook, p.8.

Figure 2
Growth Trends For Licensing Fees, Programming Expenses, Basic Revenues and Basic Rates, 1997-2002



Source:Source:Kagan World Media,Economics of Basic Cable Networks 2003,pp 18-19 and Broadband Cable Financial Databook,p.8.

Figure 1 reports estimates of cable operators' annual license fee payments to network suppliers from 1997 through 2002, the networks' content production and acquisition costs, and the basic service subscription fees received by cable systems for the same years. Year-to-year increases in all three series appear substantial in absolute terms. The annual percentage increases for the three series are shown in Figure 2, which also reports for purposes of comparison the corresponding year-to-year percentage increases in the U.S. average price of basic service. Operators' subscription revenues rose much less rapidly than did their total license fee payments to networks. The networks' programming expenses also increased considerably faster than subscription revenues, although not as fast as network license fees. The average price of basic service rose at a slightly slower rate than did aggregate basic subscription fees, with the difference reflecting the fact that the growth in subscription fees reflects growth in the number of basic subscribers during this period, as well as growth in per subscriber payments.

The critical point illustrated by Figure 2 is that while the price of basic service may have been growing at a substantially more rapid rate than the CPI, a critical component of the cost of basic service was growing much more rapidly than were the revenues from the sale of basic service. Given the unavoidable influence of costs on prices, it should not be surprising that the prices for cable services have been rising more rapidly than the CPI, regardless of the competitive situation of cable system operators. But whether cable operators have been doing a good job of creating value for their subscribers from the programming inputs they purchase simply cannot be determined from CPI comparisons.

We also cannot tell by comparing movements in cable prices to the CPI whether cable subscribers were better or worse off when prices were lower because, as was mentioned earlier, price changes may reflect changes in the quality of the service delivered consumers, as well as

changes in costs. Further complicating an assessment of industry performance is the possibility that costs may have risen because service providers and/or input suppliers increased their spending for inputs that could add value to the products and services offered consumers. If, over a period of time, an industry's price increases exceed what its customers would have been willing to pay for any improvements in the quality of its products realized during that period, the industry's customers were better off when its prices were lower. On the other hand, if an industry's prices increase, but by less than the value of improvements in its products to consumers, its customers are better off after the price increase than before. Attempts to restrict price increases could work counter to the interests of consumers in this second situation if the industry's investments in quality enhancement were undertaken in expectation that prices could be raised as the value delivered increased.

In principle, comparisons of changes in an industry's prices with the CPI could reveal whether the value net of price delivered to consumers by the industry's products was increasing or decreasing relative to other products and services in the BLS market basket if the industry's prices were appropriately adjusted to reflect changes in the quality of its products and if the prices for the other goods in the basket were also adjusted to reflect changes in their qualities. Unfortunately, this is often not possible in practice. Changes in quality are difficult to measure and the BLS makes no adjustments for changes in quality for the prices of many of the goods and services in the CPI. For other products such adjustments as are made are partial at best. This is the case for the BLS cable index, where unspecified adjustments are made to reflect the addition of new networks to cable system lineups, but no attempt is apparently made to reflect changes in the quality of the established networks already available, which account for the bulk

of cable viewing. As can be seen in Figure 4 in Section IV, the BLS cable index closely tracks a basic cable index constructed from unadjusted basic rates.

While a portion of the increase in programming expenditures by cable networks discussed above may reflect spending by new networks, network-specific data make clear that established networks increased their spending on programming substantially during this period, even as new networks were trying to find places in cable systems' network lineups. This is evident in Table 1, which reports the average for estimated programming expenditures for the top 10 cable networks (ranked by the average number of TV households in their audiences during the second quarter of 2003) for 1997 and 2002. Nine of the top ten networks increased their programming budgets during this period, most substantially and three by over 100 percent. For the top 10 networks as a whole, expenditures on programming increased by 54.9 percent. The total number of cable networks also increased considerably during this period. Due to the added expenditures of new networks, the total of cable networks' spending on programming increased even more rapidly than did expenditures by the top 10 networks.

If the value of established cable networks to cable subscribers increased as a result of their increased expenditures on programming, such adjustments as are made in the BLS cable index to reflect new services may dramatically underestimate true changes in service quality. As the Commission recognized in its Notice of Inquiry, we need better information on changes in the quality of cable services to determine whether the situation for cable subscribers has improved or worsened over time.

Table 1
Growth In Programming Expenses

Networks	Programming Expenses ($ mil.) 1997	2002
1 Nick	224.0	300.3
2 Fox News	54.0	127.0
3 TNT	396.4	690.1
4 TOON	31.1	81.1
5 Lifetime	147.4	304.5
6 Disney	102.2	140.5
7 TBS	207.1	383.0
8 USA	348.0	339.4
9 CNN	140.8	222.1
10 TLC	74.3	83.7
Top 10 Total	1725.3	2671.7
% Change	0.0%	54.9%
Total Expenses All Networks*	4698.4	9168.0
% Change	0.0%	95.1%
Top 10 As % Of All Networks	36.7%	29.1%

Sources: Cable Network Economics, Kagan World Media p6-7 and Cable Program Investor, August 21,2003, Kagan World Media, p13
**Source: Kagan World Media, "Economics of Basic Cable Networks 2003"*

IV. Assessing changes in the benefit-price relationship for cable television

Because the number of networks included in basic service packages has been increasing over time and one would expect the new channels to have some value to viewers, dividing the number of channels offered by the price of service has been suggested as one way of adjusting nominal prices for cable services for changes in service quality over time. However, as the FCC observed in paragraph seven of the Notice of Inquiry, "not all consumers watch all channels." As this observation applies to new channels as well as to existing channels, it is possible that the ratio of all new channels to all previously existing channels may be either larger or smaller than

the ratio of new channels watched to previously existing channels watched. Viewers also may not value new channels the same as those they were already receiving, which is a second potential problem with a per channel price. A third potential source of bias in this measure is that it cannot reflect changes in the value of previously existing networks to cable subscribers, the same problem identified above with the BLS cable index. If the increased programming expenditures by established networks made them more valuable to viewers, then price adjustments that only reflect increases in the number of channels over time would fail to capture all of the increased value delivered to cable customers.

Subsection A below looks at behavioral evidence which suggests that the consumption value subscribers realize from basic cable services has been increasing over time. Subsection B suggests that price per viewing hour (PPVH), which is the price cable subscribers pay for service divided by the number of hours spent watching programs on basic cable networks, may be a superior, though still imperfect, alternative to other quality-adjusted measures of the price of basic cable service. PPVH has the advantage of reflecting in a single measure changes in the nominal price of basic cable service and cable viewers' responses to changes in the quality of cable services over time.

By this measure, it appears that the value proposition offered cable subscribers has been improving steadily over time. If calculated using nominal prices (prices that are not adjusted for inflation), the nominal PPVH (NPPVH) was about three percent lower in 2003 than it was in 1997. Of course, a better measure of the true cost of cable service to cable subscribers would adjust the nominal price of cable service to reflect the effect of inflation on the purchasing power of the dollar. Using the more appropriate inflation-adjusted real price of cable service to calculate a real price per viewing hour (RPPVH), I estimate that the RPPVH has declined by

slightly over 15 percent over the last six years. Furthermore, when combined with evidence that the value of cable networks to cable subscribers has been increasing over time, a comparison of the increased time cable subscribers spend watching basic networks reported in Subsection A with the change in the inflation-adjusted average price of basic service during the same period suggests that the 15 percent reduction in RPPVH probably understates the reduction in the true quality-adjusted price of basic cable service during this period, possibly by a very substantial amount. This analysis is presented in Subsection C.

A. Increased viewing of basic networks reflects increased value of basic cable programming to subscribers

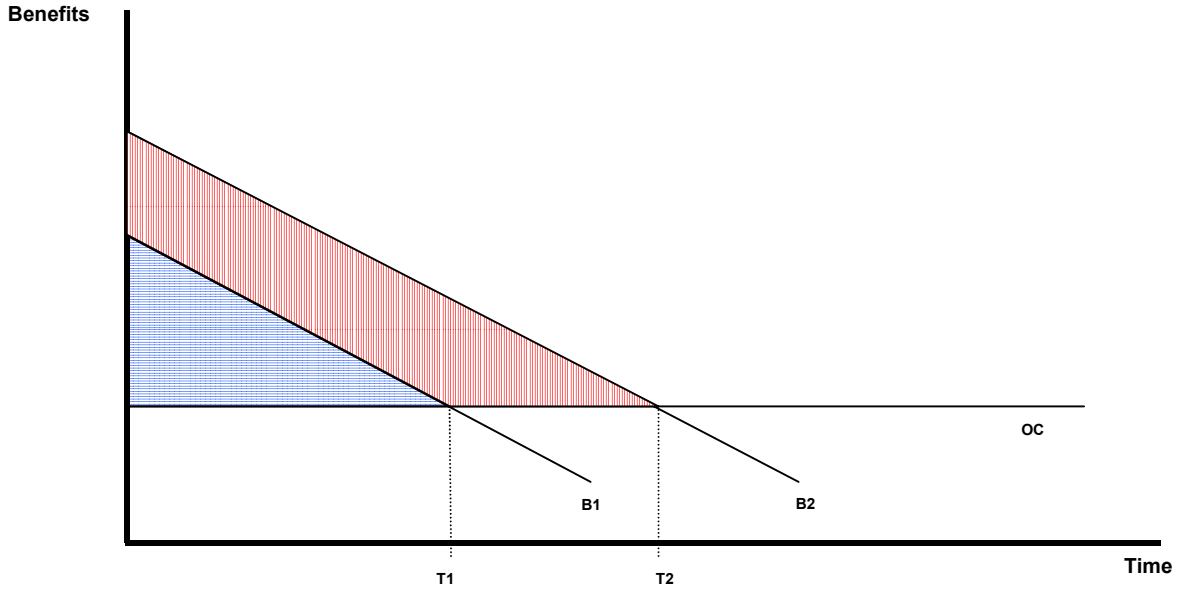
Slowly, but seemingly inexorably, cable services have been increasing their audience shares at the expense of their broadcast competitors. This trend, which has been evident since the ratings services first started reporting measures of cable audiences, has been interpreted by many as evidence that the appeal of cable programming has been increasing relative to the programs offered by the major broadcast networks and individual television stations in local markets. While increasing cable audience shares reflect viewers' decisions to spend more time watching cable networks, the actual shift in time involved is less frequently reported and is almost certainly larger than is generally realized. From the 1996-1997 television viewing season to the present, which is the period of time covered by the data examined below, the amount of time the average cable household spent watching the ad-supported cable networks that predominate in cable systems' expanded basic packages increased by 43 percent—from 24 hours and 22 minutes per week to 34 hours and 44 minutes per week.[176] Even more so than the increases in cable viewing shares that are more commonly cited, this increase in time spent

[176] 1996/97-2001/02: CAB, CableTV Facts 2003, p. 7; 2002/03 estimate: CAB.

watching basic cable programming is direct evidence of an increase in the value of basic cable programming to cable subscribers.

The economics behind this observation is straightforward. Subscribers pay a fixed monthly fee for basic service that does not vary with the amount of time they spend watching basic cable programs. Because cable subscription fees are fixed independently of the amount of cable programming watched, a subscriber's decision to spend more or less time watching cable television must reflect a change in the relative benefits anticipated from spending that time watching cable programs or engaged in other time-consuming activities. This relationship is illustrated diagrammatically in Figure 3.

Figure 3
Benefits of Improved Programming to a Representative Subscriber



B1 and *B2* in Figure 3 are marginal benefit of viewing schedules for a representative cable subscriber. The schedules give the marginal value to the viewer of different amounts of time spent watching ad-supported, basic cable channels, starting with the program valued most

highly and proceeding through the remaining programs in order of descending value. *B1* is the benefit schedule before an increase in programming quality. *B2* is the benefit schedule after quality has increased. Benefits are measured vertically and time spent viewing or doing other things is measured on the horizontal axis. The horizontal line, *OC*, is the opportunity cost of time spent doing something other than watching cable TV, which would include watching local over-the-air TV channels carried by the cable system along with other things the subscriber might do with her time.[177]

The increase from *T1* to *T2* in time spent watching programs on basic channels is the representative subscriber's response to the increase in the quality of programs available on basic channels. As such it is a direct reflection of the fact that programming quality has increased. (It could also reflect an increase in the quality of the viewing experience due to technical improvements in the distribution system.) While the increase in time spent watching cable programs is evidence that the quality of cable service has increased, by itself, it cannot tell us how much overall benefits have increased because it only reflects the shift in that portion of the benefit schedule near its intersection with *OC*.

The total increase in the value of basic service to the representative cable subscriber can also be represented with Figure 3. In what follows I will use the term "added value" to refer to the benefits a cable subscriber realizes from watching basic cable programs over and above the benefits she would have been realized from the next best use of the viewing time. The added value of programming watched before the increase in quality is the horizontally shaded triangle under *B1* and above *OC*. The overall increase in value due to the increase in quality is the

[177] If cable programs were homogeneous goods, a benefit schedule could be converted to a representative viewer demand curve by subtracting OC from the height of the benefit schedule, because the maximum a consumer will

additional vertically shaded region between *B1* and *B2* and above *OC*. As drawn, *B2* is parallel to *B1* and it is apparent on inspection that the percentage increase in value delivered to the representative subscriber is considerably greater than the percentage increase in viewing time. (The horizontal distance between *B2* and *B1* is constant, while the distance from *B1* to the vertical axis diminishes as we move up *B1* from its intersection with *OC*.)

For the 1997 and 2003 benefits schedules for basic cable programs, we know only the magnitude of the distance between them where they intersect OC, which is the 10 hours and 22 minutes of extra time spent watching basic cable networks. However, a general and broadly distributed increase in cable networks' ratings during the period examined here strongly suggests that the substantial increase in cable networks' programming budgets during this period combined with the introduction of new networks has shifted the entire benefits schedule outward—not just the lower portion near the opportunity cost line, as might be the case if the audiences attracted by new networks accounted for most of the increase in time spent watching cable programs.

Because it takes time for new networks to build coverage and, more significantly, to develop a following among the subscribers they do reach, the most popular cable networks tend to be the ones that have been around for a while. Thus, among the 10 most popular cable networks in the Second Quarter of 2003, the youngest (Fox News) was launched in 1996 and the second youngest (Cartoon Network) launched in 1992. All the rest commenced operations in the 1970s (2) or the 1980s (6), and all but one of these started up prior to 1985. Among the second 10 most popular networks, only four were launched in 1994 or later, and just one, Lifetime Movie Network, which started up in 1998, was launched after 1996. 24 hour ratings for the five

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pay for a unit of a product is the difference between the consumption value anticipated and the opportunity cost

least watched of the top 20 network varied from a third to just under half of the 24 hour ratings for the most popular networks. Many of the newer networks are not listed in this table because their audiences are not large enough to be reported by Nielsen.[178]

The Nielsen estimates of cable network audiences over the last six years reported in Table 2 show that within-coverage area 24-hour ratings have grown for the more popular established networks even as an increasing number of new networks have also managed to attract viewers. With the exception of the top five networks, for which there was a slight decline in the average rating from 1997 to 2003 due to a substantial drop in prime time ratings for one of the networks, the same pattern is evident in the networks' prime-time ratings during this period reported in Table 3. The largely across the board increase in cable networks' ratings suggests that the quality of cable networks' programming has also increased across the board. Just as the viewers attracted by new networks are evidence of added value for viewers, so are the audience gains of established networks.

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of the next best option.

[178] Nielsen does not report audience estimates for programs with very small audiences because the numbers of viewers watching these programs in their measured sample audience is too small to report estimates with acceptable degrees of statistical significance.

Table 2
Average Full Day Rating By Coverage Area

Average Full Day Rating	1997*	2003
Top 5 Networks	1.06	1.24
Top 6-10 Networks	0.49	0.84
Top 11-15 Networks	0.26	0.56
Top 16-20 Networks	0.20	0.50
Top 21-25 Networks		0.40
Top 26-30 Networks		0.40
Top 31-35 Networks		0.30
Top 36-40 Networks		0.22
Top 41-45 Networks		0.20
Top 46-50 Networks		0.12
Top 51-52 Networks		0.05

**) For 1997, there are only 17 stations listed*
Sources: Cable TV Programming, Aug 31, 1997, Kagan World Media,pp 6-7 and Cable Program Investor, Aug 21, 2003, Kagan World Media, p 13

Table 3
Average Prime Time Rating By Coverage Area

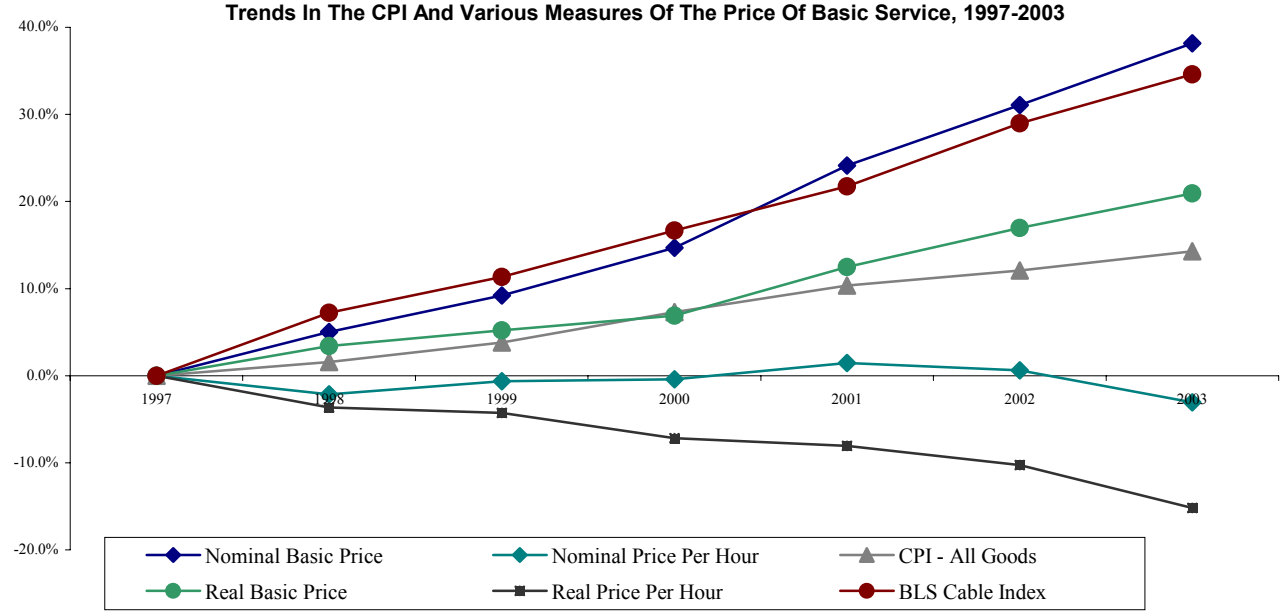
Prime Time Day Rating	1997*	2003
Top 5 Networks	1.89	1.78
Top 6-10 Networks	1.23	1.36
Top 11-15 Networks	0.81	0.98
Top 16-20 Networks	0.49	0.86
Top 21-25 Networks	0.34	0.68
Top 26-30 Networks	0.30	0.60
Top 31-35 Networks		0.46
Top 36-40 Networks		0.40
Top 41-45 Networks		0.24
Top 46-50 Networks		0.20
Top 51-52 Networks		0.05

**) For 1997, there are only 27 stations listed*
Sources: Cable TV Programming, Aug 31, 1997, pp 6-7 and Cable Program Investor, Aug 21, 2003, p 13

B. Measured per unit of viewing time, the price of cable basic cable service has been falling

The data on viewing hours and basic cable prices presented above showed that both have increased substantially over the past six years. Calculated in percentage terms, the two increases were nearly identical, with a slightly larger percentage increase in time spent viewing producing about a three percent decline in subscriber payments per viewing hour. This, of course, ignores changes in the value of the dollar over this time. Due to low but persistent inflation, approximately $1.14 was required in June of 2003 to purchase what a dollar would have bought in 1997. Seven-year trends in the nominal and real prices per hour of cable viewing (NPPVH and RPPVH) are shown in Figure 4. When the price of basic cable service is adjusted for the reduction in the purchasing power of the dollar over time, the real price paid for an hour of cable viewing is shown to have fallen by about 15.2%, which is a fairly substantial reduction.

Figure 4
Trends In The CPI And Various Measures Of The Price Of Basic Service, 1997-2003



Source: BLS CPI Data, NHI NTAR; 3rd Quarter various years, and 2003 Kagan World Media, Broadband Cable Financial Databook, 2003.

Price per viewing hour is an intuitively appealing index of value delivered because it is a ratio of payments made to a measure of services actually consumed. It also has the advantage of

reflecting in a single measure changes in nominal prices and viewer responses to changes in the quality of services provided, as was mentioned earlier. Its principle shortcoming is that it assumes that the added value delivered to viewers is not concentrated in the new programs and networks watched, but is also comprised in substantial part from increased value delivered by the networks and programs that viewers were already watching, when this might not be the case. While the general increase in cable networks' viewing shares documented above is evidence that both old and new networks have contributed to an increase in the value of basic cable service to subscribers, the question of the size of their relative contributions still remains. However, utilizing the data reported above on changes in the inflation-adjusted average price for basic service and household average changes in time spent watching basic cable networks and plausible assumptions regarding changes in the benefits cable viewers derive from watching basic cable programs, it is possible to estimate changes in the benefits of subscribing to a basic cable service for a representative cable household for a number of plausible scenarios. The calculations reported below suggest that changes in RPPVH may substantially understate the extent to which the real quality-adjusted price of basic cable service has declined.

C. Representative household estimates of changes in quality-adjusted prices

To construct estimates of changes in quality-adjusted prices, it is convenient to represent the added value of basic service in terms of the mean added value of the individual programs watched. Total added value is the mean added value times the total number of programs watched. Similarly, the price paid for basic service can be expressed as the price per viewing hour times the number of hours watched. The net benefit of basic cable service to a subscribing

household's welfare is the difference between the total added value of basic service and the price of the service. Estimates of average viewing hours and the real price per viewing hour were presented in Subsections A and B above. If we had comparable estimates of mean added values, we could calculate directly the effects of changes in programming quality for a representative basic cable household.

Let *M1* be the mean of the added value of basic cable programs watched by a representative household in 1997 and let *M2* be the mean added value for cable programs watched in 2003. In terms of Figure 3, *M1* would be the area of the horizontally shaded triangle divided by *T1* and *M2* would be the sum of the areas of the horizontally shaded triangle and the vertically shaded region divided by *T2*. For the representative cable subscriber, the change in the net benefits (*CNB*) of cable viewing from 1997 to 2003 is given by equation (1).

$$CNB \equiv (M2 - P2)T2 - (M1 - P1)T1, \tag{1}$$

where *P1* and *P2* are the real prices per viewing hour for 1997 and 2003 respectively.

For the average cable household, *P2*=0.85P1, as reported in the previous subsection, and from the 43 percent increase in time spent watching basic cable networks from 1997 to 2003 we know that *T2*=1.43T1. If we express *M2* as a multiple *m* of *M1*, so that *M2=mM1*, we can use the following simplified expression for *CNB*.

$$CNB = [(1.43m - 1)M1 - 0.2155P1]T1. \tag{2}$$

We can use equation (2) to solve for $\hat{m}$, the value of *m* for which *CNB* equals zero. The importance of $\hat{m}$ is that if *m* is less than $\hat{m}$, the representative subscriber derives less value from basic cable in 2003 than she did in 1997. If *m* is greater than $\hat{m}$, she is better off in 2003. Letting *r* stand for the ratio of *P1* to *M1*, we have

$$\hat{m} = \frac{(1 - 0.2155r)}{1.43}. \tag{3}$$

P1 can be no greater than *M1*. If it were, the cost of service would exceed its benefits and the household would not subscribe. For *P1*=*M1*, *r*=1 and $\hat{m}$=0.549. This is the smallest possible value for *m*. $\hat{m}$ achieves its maximum value of just under 0.7 if r is equal to zero, in which case the ratio of benefits delivered to the price paid is so great that price is trivial in comparison, as would be the case if the price was zero. More plausible ratios of *P1* to *M1* produce values of $\hat{m}$ between these extremes. For example, $\hat{m}$ would be approximately 0.624 if *P1* were half of *M1*. These calculations are of particular relevance to an attempt to determine whether cable subscribers are better or worse off following the increases in subscription prices and viewing time noted above because they tell us that for the representative subscriber to be worse off after the price and quality changes than before, the average net benefits realized from an hour spent watching basic cable programs would have to fall to less than seventy percent of its initial value. This flies in the face of the evidence presented earlier that viewers value cable programming more highly today than they did in 1997.

Dividing *CNB* by *(M1-P1)T1* allows us to calculate percentage changes in the total net benefits realized by the representative viewer for different values of *m* and *r*. Thus for *m*=1, in which case the average hour of cable viewing would deliver the same net benefits to a cable

subscriber in 2003 as in 1997, and r=0.9, benefits net of price for the representative cable subscriber would have increased by 236 percent. But even for r at its lowest possible value of zero, the representative subscriber's net benefits would still increase by a minimum of 43 percent, nearly three times the 15 percent reduction in RPPVH, as long the average value of an hour of cable viewing did not decline from 1997 to 2003. If it rose, the increase is potentially much larger.

Of course we don't know the actual values of m and r. But these calculations based on hypothetical values for these ratios illustrate an important point. Given the large increase in time spent watching cable networks over the last six years and the decline in the real price per hour of cable viewing, it seems highly likely that cable subscribers have benefited substantially from changes in the services provided, even though they are paying more for cable service now than they did in 1997.

V. Conclusions

While the nominal price of basic cable service has been increasing over time, the dramatic increase in the amount of time cable subscribers spend watching basic cable networks is compelling evidence that the quality of basic services has been increasing as prices have been going up. A dramatic increase in spending on programming by the basic networks has undoubtedly contributed substantially to the increase in quality. The real (inflation-adjusted) price of cable service divided by the number of hours spent watching basic cable programming is an appealing measure of changes in the quality-adjusted real price of basic service because it reflects both changes in the price of service and viewer responses to changes in service quality

over time. Calculations based on a hypothetical representative basic subscriber suggest, however, that for the 1997-2003 period, the estimated 15 percent reduction in the real price per viewing hour for basic service may substantially understate the reduction in the true (but unobserved) quality-adjusted price of basic service.

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"ATV Standards and Trade in Recorded Video Entertainment," paper presented at the Sixteenth Annual Telecommunications Policy Research Conference, October 30-November 1, 1988, Airlie, VA, revised April 1989.

"Competition, Regulation and Sources of Market Power in the Radio Industry," with Duncan J. Cameron, May 1982, revised October 1989.[1]

"Program Choice in a Broadband Environment," with Nancy Y. Lee, Working Paper, Center for Telecommunications and Information Studies, Columbia University, May 1989.[1]

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[181] Joint author credited as a "with."

"Trade in Films and Television Programming," with Stephen E. Siwek, presented at Trade in Services and Uruguay Round Negotiations, London, England, July 8, 1987, and Geneva, Switzerland, July 18, 1987.[1]

Review of *Oligopoly Theory*, by James Friedman, *Journal of Economic Literature*, March 1985.

"Recruiter Incentives: Effects on Performance," Rand Cooperation Working Draft, April 1983.

"Anticipated Preemption and the Determination of Initial Structure in a Growing Market," UCLA Working Paper No. 267, September 1982.

"A Spatial Model of Entry Deterrence," S.I.E. No. 103, Department of Economics, Stanford University, November 1978, revised December 1980.

"Advertising, Consumer Learning and Competitive Strategies," Dissertation filed January 1980. Also published as S.I.E. paper No. 110 by Department of Economics, Stanford University, December 1979.

"A Study of Economic Issues in the Recording Industry," with James N. Dertouzos.[2] Study commissioned by the National Association of Broadcasters.

OTHER PROFESSIONAL ACTIVITIES

Co-convener, conference on telecommunications free trade zones, Northwestern University, March 30, 1992. Sponsored by the Annenberg Washington Program of Northwestern University and the Illinois Commerce Commission.

Convener, half-day conference on electronic services networks at Northwestern University, April 9, 1990.

Co-convener, day-long Washington, D.C. conference on electronic services networks sponsored by the Annenberg Washington Program, February 23, 1990.

Member, Editorial Board, *Journal of Media Economics*.

Member of Organizing Committee for the Nineteenth and Twentieth Annual Telecommunications Policy Research Conference, Solomon Island, MD.

Member, Executive Committee, Consortium for Research in Telecommunications.

Organizer, 1996 Conference on Telecommunications Policy and Strategy of the Consortium for Research in Telecommunications Policy, Evanston, IL, May 10,11, 1996

Co-organizer, Telecommunication Policy and Law Symposium: "Preventing Flawed Communication Policies by addressing Constitutuinoal Principles", Washington, D.C., April 18, 2000.

Member, National Research Council Broadband Last Mile Committee, Fall 1999-present.

REFEREEING AND REVIEWING

American Economic Review, referee
Communication Law and Policy, referee
Communication Research, referee
Communication Theory, referee

Journal of Economics and Busines, referee
Information, Economics and Policy, referee
Information Systems Research, referee
International Journal of the Economics of Business, referee
International Journal of Industrial Organization, referee
International Journal on Media Management, Associated Reviewer and referee,
Journal of Broadcasting and Electronic Media, referee
Journal of Communication, book reviewer
Journal of Information, Economics and Policy, referee
Journal of International Economics, referee
Journal of Economic Literature, book reviewer
Journal of Industrial Economics, referee
Journal of Media Economics, editorial board, referee
National Science Foundation, proposal reviewer
The Rand Journal of Economics, referee

APPENDIX B

Statement of Dr. Debra J. Aron
Director, LECG and Professor, Communications Systems, Northwestern University

I. Qualifications and introduction

1. My name is Debra J. Aron. I am an Adjunct Associate Professor in the School of Communication at Northwestern University and a Director at LECG, LLC in Evanston Illinois. My business address is 1603 Orrington Avenue, Suite 1500, Evanston, IL, 60201.

2. LECG, LLC is an economics and finance consulting firm, providing economic expertise for litigation, regulatory proceedings, and business strategy. Our firm comprises more than 350 economists and professional staff from academe and business, and has offices in North America, South America, Europe, Australia and New Zealand. LECG's practice areas include antitrust analysis, intellectual property, and securities litigation, in addition to specialties in the telecommunications, gas, electric, and health care industries.

3. I received a Ph.D. in economics from the University of Chicago in 1985, where my honors included a Milton Friedman Fund fellowship, a Pew Foundation teaching fellowship, and a Center for the Study of the Economy and the State dissertation fellowship. I was an Assistant Professor of Managerial Economics and Decision Sciences from 1985 to 1992, at the J. L. Kellogg Graduate School of Management, Northwestern University, and a Visiting Assistant Professor of Managerial Economics and Decision Sciences at the Kellogg School from 1993-1995. I was named a National Fellow of the Hoover Institution, a think tank at Stanford University, for the academic year 1992-1993, where I studied innovation and product proliferation in multiproduct firms. Concurrent with my position at Northwestern University, I also held the position of Faculty Research Fellow with the National Bureau of Economic Research from 1987-1990. At the Kellogg School, I have taught M.B.A. and Ph.D. courses in managerial economics, information economics, and the economics and strategy of pricing. I currently teach a Master's course on competition and strategy in communications markets at Northwestern University. I am a member of the American Economic

Association and the Econometric Society, and an Associate member of the American Bar Association.

4. My research focuses on multiproduct firms, innovation, incentives, and pricing, and I have published articles on these subjects in several leading academic journals, including the American Economic Review, the RAND Journal of Economics, and the Journal of Law, Economics, and Organization. My academic publications include research on penalty mechanisms and incentive devices.

5. I have consulted on numerous occasions to the telecommunications and media industries on issues pertaining to the development of competition, the effects of regulatory rules on competition, and strategic and efficient pricing. I have submitted affidavits to the FCC on various issues pertaining to competition analysis, including an analysis of market power in support of an incumbent local exchange carrier's petition for Section 10 forbearance from regulation of high-capacity services in the Chicago LATA, CC Docket No. 95-65. I have conducted analyses of mergers in many other industries under the U.S. Department of Justice and Federal Trade Commission 1992 Horizontal Merger Guidelines, and in other countries, including cable industry mergers. In addition, I have consulted in other industries regarding potential anticompetitive effects of bundled pricing and monopoly leveraging, market definition, and entry conditions, among other antitrust issues, as well as matters related to employee compensation and contracts, and demand estimation. In 1979 and 1980, I worked as a Staff Economist at the Civil Aeronautics Board studying price deregulation of the airline industry. In July 1995, I assumed my current position at LECG. My professional qualifications are detailed in my curriculum vitae, which is attached as Appendix A.

6. I have been asked by the National Cable & Telecommunications Association to respond to comments and inferences made by various industry observers regarding the market power of cable service providers. My discussion will not focus on the market power of specific carriers themselves, which I have not analyzed, but rather will focus on the economic principles that are critical in any market power analysis. In particular, my purpose is to correct two oft-repeated but erroneous inferences regarding market power. These are (1) the claim that sustained increases in real prices (that is, sustained price

growth faster than the rate of inflation) indicates market power; and (2) that market share is a reliable indicator of market power. Neither of these is an economically valid statement and subscription to either one is likely to lead to erroneous conclusions.

II. Sustained growth in a firm's real prices does not imply market power

7. Industry observers have noted in the press with much indignation that prices in the cable television industry have risen faster than the rate of inflation in recent years. These observers argue (or simply claim) that this observation is evidence of market power by the cable companies. High growth rates of prices, however, do not in general create an economic inference of market power.

8. As a basic economic principle, firms with greater market power would be expected to charge higher prices than those with less market power, all else equal. This means that if one were to imagine two markets, A and B, in which cost conditions, demand conditions, and other economic conditions were identical, one would expect prices to be higher in market A than in market B if firms in market A had a greater degree of market power than those in market B. This familiar proposition, that prices are expected to be correlated with market power at a point in time, is virtually tautological**.**

9. It is not true, however, nor does it follow from the preceding discussion, that firms with higher market power would be expected to demonstrate a higher *growth rate* of prices over time than would firms with lesser market power, all else equal. The latter proposition, though often asserted or implied in the popular press and similar venues, is not supported by economic logic.

10. Similarly, one would not expect firms with high market power necessarily to demonstrate higher growth rate of prices over time than the rate of inflation, nor, conversely, can one expect that a firm with price growth faster than the rate of inflation has an above-average level of market power.

11. Prices change over time for various reasons.[182] At a microeconomic level, firms raise prices because something in their profit calculation changes. This could be a change in demand, a change in the costs of inputs, a change in technology, a change in the competitive characteristics of the market, or other factors. Changes in demand can include increases or decreases due to overall population growth or demographic changes, changes in the prices of related products, or more subjective factors such as changes in fashion or tastes. Changes in the costs of inputs could include interest rate changes, changes in labor costs due to renegotiation of union contracts or increased demands for certain skills in the economy, or changes in the supply of certain types of skills. Cost changes can also result from changes in the costs of material inputs into production, or equipment necessary for production. Changes in technology can include process improvements that lower the cost of production, or that offer new product features or functionalities. Changes in the competitive characteristics of the market may include entry of new providers, mergers, technological changes that lower entry barriers, and regulatory changes. In all cases, one would generally expect that sustained—as opposed to one-time—price changes are the response to sustained changes in one or more of the above-listed factors. For example, if the demand for a product were suddenly to rise significantly, one would expect a relatively rapid adjustment in price, followed by a new plateau at the new price. Over time, the higher price might attract entry into the market or expansion of existing capacity, ultimately driving price back down. But a one-shot demand increase would not be expected to generate sustained growth in price over time. In contrast, continued growth of demand due to population growth could cause price to rise continuously if the rate of entry or expansion in the market did not keep up with the rate of population growth.

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182 I focus here on changes in the level of prices, rather than the structure of prices. By price structure, (as opposed to pricing levels) I refer to the particular combination of price elements charged. Per-unit charges, flat rates, fixed fees, tiered prices, menus of prices, bundles of units, volume discounts term commitments, volume commitments, and combinations of the above are all different kinds of pricing structures. Pricing levels refer to the dollar value of the rate elements.

A firm might change its pricing structure without necessarily changing its pricing level, and may do so for a variety of strategic, economic, or marketing reasons. I do not consider the specific reason for such changes in this affidavit.

12. The effect that each of the factors I have listed would have on the price would depend on the unique characteristics of the market. For example, the effect on price of a given cost increase would depend on whether the increased costs are fixed or variable costs, the degree of substitutability with other inputs whose prices did not rise, the elasticity of demand, the nature of competition, and other factors.

13. At a macroeconomic level, changes in the overall level of prices (i.e., inflation or deflation) may be triggered by a number of policy variables (such as fiscal, monetary, or trade policy), but these policy changes find their way into prices changes through the individual microeconomic mechanisms I discussed above. For example, macroeconomic policy efforts might increase interest rates, but this ultimately affects the price of various goods and services because interest rate changes affect the costs of production and demand for various goods. The effect on each individual market will be unique to that market.

14. The rate of inflation in the economy is, very roughly, a weighted average of the increase in prices overall in the economy. When there is inflation, some prices will necessarily have increased more than inflation, some less, and some may have decreased. How the prices of each individual product will have changed in a given year will depend on how the various changes I discussed earlier—costs, demand, technology, and competition—have changed in that particular industry, how those unique changes affected the price, and the interaction of the changes with the other characteristics of the market.

15. One reason, then, that one cannot infer the level of market power from observations of price growth is simply that there are many causes of price growth, and all may play a role in any observed price path. Moreover, the price path of any particular industry is not likely to exactly equal the rate of inflation, simply by virtue of the fact inflation is an average of all the disparate price paths in the economy.

16. In particular, the observation that an industry's prices are growing at a rate faster than the rate of inflation establishes no inference about market power. A monopolist who is fully exploiting its market power, as it normally has every incentive to do, would have no

reason to increase its price unless its costs, demand, or technology changed. If it is fully exploiting its market power, it does not benefit from increasing its price because *it is presumably already charging the profit maximizing price*, any deviation from which would simply lower profits.

17. One might ask, though, whether a monopolized industry, or one with firms holding a high degree of market power, would be expected to show higher price growth holding all these other factors constant. The answer in general is no. As I indicated earlier, market power would be expected to lead to higher prices, but not higher price growth. Price growth would typically be associated with market power only to the extent that market power itself is growing over time. Hence, regardless of the existing market power of the ostensible monopolist, if the evidence is that the competitive power of rivals is growing, rather than declining, one would not generally expect the growth in prices to be attributable to market power factors.

18. One might nevertheless seek to justify the claim that sustained, above-average price growth signals market power, on the basis of a theory that market power magnifies the effect of other changes in the market. For example, if the fundamental source of price growth in a market is that costs are growing, one might ask whether cost increases would be passed through more readily by a firm with market power than by a firm in a competitive market.

19. The answer, surprisingly, is no, not as a general rule. The determinants of how much of a cost increase is passed through are somewhat complex, but the general principles are these. In a market that resembles the textbook construct of "perfect competition," all cost increases (and no more) will be passed through in the long run. In the short run, an increase in variable costs will be partially passed through, with full adjustment in price coming as unprofitable firms drop out of the industry. An increase in fixed costs will be fully passed through in the long run also, as firms drop out of the industry due to the higher cost structure.

20. The other extreme market structure is perfect monopoly. In that textbook setting, how much of a cost increase is passed through to consumers depends on the elasticity of demand for the product. Two simple cases illustrate the fact that there can be many possible outcomes and that, unlike the case of a perfectly competitive market, it is quite possible that substantially less than the full cost increase will be passed through to consumers, even in the long run. First, when demand is linear, half of any increase in variable cost will be passed through to consumers, and half will be absorbed as a decrease in profit. If demand is of the constant elasticity form, more than 100% of the cost increase will be passed through (with less elastic demand resulting in greater passthroughs). Other demand functions will generate other results, the implication being that a monopolized market may pass through less than the total increase in variable costs, all of it, or more, depending on factors that are unique to the market demand. When a monopoly experiences a cost increase, moreover, there is no long run adjustment period comparable to that in a competitive market. The effect of cost increases in a competitive market—that marginal firms exit—is not a factor in a monopolized market. The short run response is the full response.[183]

21. Moreover, in a monopolized market, any increase in fixed (as opposed to variable) costs is fully absorbed by the monopolist. Unlike a competitive market, which fully passes along an increase in fixed costs in the form of higher prices in the long run, a rational monopolist cannot improve its profits by increasing price in response to an increase in fixed costs if it was charging the profit maximizing price to begin with. Hence, considering increases strictly in fixed costs, one would expect the result to be higher prices over time in the competitive market, but no price increases from a monopolist.

22. When the market is characterized by oligopoly, the theoretical predictions about the degree to which price increases would be passed on to consumers is still more complex and is less well established. In my experience teaching pricing theory and strategy, and

[183] There may be "longer" run effects reflecting adjustments to costs that can only be accomplished over time. For example, if demand increases, the firm might not be able to expand its capacity immediately to satisfy the demand efficiently. Hence, there may be a longer run adjustment by which costs decline as the firm efficiency expands output. These cost adjustments typically, if anything, would cause prices to decline after an initial price increase, but not to continue to increase.

consulting on various pricing issues, I have not seen any general theoretical result in the professional economics literature that describes the degree to which cost increases are passed through as a function of different degrees of market power in oligopoly market structures, nor have I seen any cross-industry statistical analyses of this issue.

23. Hence, to my knowledge, there is no theoretical or empirical basis upon which to conclude that continuous, sustained increases in cost would result in higher growth rates of prices in a monopoly market or an oligopoly market than in a perfectly competitive market.

24. The foregoing discussion pertains to the effect of sustained increases in costs, but one could analyze the effects of other sources of price changes as well, such as technological change. The qualitative conclusion would be the same: there is no theoretical reason to predict as a general matter that greater market power would be expected to lead to higher growth rates of prices, nor is there any reason to predict that a market exhibiting higher growth rates of prices is characterized by firms with greater market power. A specific theory as to how the price behavior in the market in question would deviate from the predictions of standard economic principles, coupled with specific factual evidence, would be necessary to overcome this robust economic principle. For any given industry, if one observes prices rising faster than the rate of inflation, one could test empirically whether the growth rate could be explained in that case by market power. Doing so would require controlling for other factors, such as cost increases, demand increases, and technological changes. But absent some sort of empirical demonstration, there is no basis on general principles for attributing sustained real price growth to market power.

III. Market share in not a reliable measure of market power

25. I understand that industry observers have also argued that the high degree of concentration (i.e., the high market share of the incumbent cable providers) in the market for delivery of video programming demonstrates that the incumbent cable providers have a high degree of market or monopoly power. Market share is not, however,

determinative of market power; indeed, it is not even the primary determinant. This is true as a general matter, but, in particular, in a market in which an incumbent is moving from a protected or de facto monopoly to a competitive environment, market share can be a very misleading measure of market power, and other measures are more informative and useful.

26. A market share analysis focuses on past competitive losses, rather than forward-looking competitive alternatives. In economics, market power can be defined as "the ability … to raise price above the competitive level without losing so many sales so rapidly that the price increase is unprofitable and must be rescinded."[184] The true determinant of the market power of a given firm, then, is the extent to which competitive alternatives are available or poised to be available, to which customers could turn if the firm attempted to raise price. If competitors could expand their output or enter the market with sufficient capacity in a timely fashion to satisfy the demand for alternatives created by the firm's price increase, those competitors would impose a competitive constraint on the firm's ability and desire to raise its price. That is, they would decrease or eliminate its market power.

27. Most fundamentally, it is the availability of competitive alternatives, not a competitor's current market share, that is relevant to assessing competition. In particular, the ability of actual competitors to expand output to meet consumer demand and/or the ability of potential competitors to enter and provide reasonably substitutable services are the key determinant of market power. The ability of suppliers to respond to potential price increases in a timely fashion can be summarized as the "supply elasticity," which generally measures the extent to which rivals will increase output through expansion and/or entry in response to a given increase in price. Market share can sometimes be a useful, simple proxy for the viability of competitive alternatives, but because it is not

184 W.M. Landes, and R.A. Posner, "Market Power in Antitrust Cases," *Harvard Law Review*, vol. 94 (1981), p. 937. The Department of Justice/Federal Trade Commission *1992 Horizontal Merger Guidelines* similarly defines market power as "the ability profitably to maintain prices above competitive levels for a significant period of time," but also note that "sellers with market power also may lessen competition on dimensions other than price, such as product quality, service, or innovation." See the introductory section of the *Merger Guidelines*.

always or necessarily a good proxy for the supply elasticity, it can be misleading and induce erroneous conclusions.

28. Market share data can mask the true competitive situation for several reasons, all of which appear to be relevant to the market for delivery of video programming.

29. The first and most fundamental reason that market shares can be a misleading measure of competition is, as I indicated, that they are a static picture of the market that do not reflect the presence or absence of barriers to expansion and entry into the market. Economists, the courts, and the federal antitrust agencies recognize that the ability of rivals to expand output is critical to determining the ability of any firm in a market to exercise market power. If there are no significant barriers to expansion and/or entry, then market share is essentially irrelevant; no firm, no matter how large its market share, could exert significant market power for any length of time. Ease of expansion of existing competitors or entry of new competitors, therefore, trump market share.

30. Second, market share is a particularly inappropriate measure of competition in a market that is emerging from regulated monopoly environment, because an incumbent's market share tends to understate the degree of competition during a transition to competition, and tends to underestimate a competitor's future competitive significance.[185] A market that was, in recent history, a protected monopoly, may well be much more concentrated than an equally competitive market without a regulated history. Market shares are "path-dependent;" i.e., they depend upon past market shares, even if the market is now highly competitive. An incumbent that prices competitively need not lose customers to competitors; if the incumbent prices so as to reflect the competitive threat, there is no incentive for its existing customers to move. Customers nonetheless receive the benefits of competition even if the incumbent's market share does not change.

31. The shortcomings of market share as a measure of market power are well recognized by U.S. competition policy. The US Department of Justice's Merger Guidelines, for example, memorialize into competitive policy the economic principle that "a merger is

[185] The *Merger Guidelines* state that "recent or ongoing changes in the market may indicate that the current market share of a particular firm either understates or overstates the firm's future competitive significance." (§ 1.521)

not likely to create or enhance market power or to facilitate its exercise, if entry into the market is so easy that market participants, after the merger, either collectively, or unilaterally, could not profitably maintain a price increase above premerger levels."[186] The statement is equally applicable to supply responses via the expansion of output from providers who are already in the market. The antitrust courts have also reflected these economic principles.[187]

32. Indeed, the FCC itself has repeatedly recognized the significant shortcomings of market share as a measure of competition. In its 1996 order declaring AT&T non-dominant, the FCC wrote:

> It is well established that market share, by itself, is not the sole determining factor of whether a firm possesses market power. Other factors, such as demand and supply elasticities, conditions of entry and other market conditions, must be examined to

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[186] *Merger Guidelines*, §3.0.

[187] See also ABA Section of Antitrust Law, *Antitrust Law Developments* (4th ed. 1997), pp. 328-332, a standard source for practicing antitrust attorneys and economists, citing: United States v. Baker Hughes Inc., 908 F.2d 981, 987 (D.C. Cir. 1990) ("In the absence of significant entry barriers, a company probably cannot maintain supracompetitive pricing for any length of time"); California v. American Stores Co., 872 F.2d 837, 842-43 (9th Cir. 1989) (recognizing that "[a]n absence of entry barriers into a market constrains anticompetitive conduct, irrespective of the market's degree of concentration," but finding that district court could properly have concluded, based on conflicting evidence, that defendant's proof of ease of entry was not sufficient to overcome plaintiff's prima facie case), *rev'd on other grounds*, 495 U.S. 271 (1990); Oahu Gas Serv. v. Pacific Resources, Inc., 838 F.2d 360, 366 (9th Cir.) ("A high market share, though it may ordinarily raise an inference of monopoly power, … will not do so in a market with low entry barriers or other evidence of a defendant's inability to control prices or exclude competitors."), *cert. denied*, 488 U.S. 870 (1988); United States v. Waste Mgmt., Inc., 743 F.2d 976, 981-83 (2d. Cir. 1984) (prima facie illegality of 48.8% postmerger market share rebutted by ease of entry into Dallas County commercial trash collection market); United States v. Gillette Co., 828 F. Supp. 78m 84 (D.D.C. 1993) ("there is ample evidence that the mechanics of fountain pen design are readily available, thus leaving no technological barriers to [new] entry [and there] … are also no legal or regulatory barriers"); Pennsylvania v. Russell Stover Candies, Inc., 1993-1 Trade Cas. (CCH) ¶ 70,224, at 70,093-94 (E.D. Pa. 1993) ("defendant can rebut the evidence [of a prima facie violation] by showing that barriers to entry are not significant"); United States v. Syufy Enters., 712 F. Supp. 1386, 1401 (N.D. Cal. 1989) (showing of absence of entry barriers "undermines any claim of monopoly power"), *aff'd*, 903 F.2d 659 (9th Cir. 1990); United States v. Calmar Inc., 612 F. Supp. 1298, 1306-07 (D.N.J. 1985) (ease of entry ensured that merger would not injure competition, despite the fact that it resulted in leading firm with 50% of market and HHI of 3000); Echlin Mfg. Co., 105 F.T.C. 410, 485-92 (1985) (Lack of entry barriers into the assembly and sale of carburetor kits eliminates any possibility of a substantial anticompetitive effect); Frank Saltz & Sons v. Hart Schaffner & Marx, 1985-2 Trade Cas. (CCH) ¶ 66,768 at 63,724 (S.D.N.Y. 1985) (dictum) (noting that even if concentration had been high, relative ease of adapting a factory from lower quality clothing to better quality men's suits would have precluded finding an antitrust violation); United States v. Tracinda Inv. Corp., 477 F. Supp. 1093, 1108 (C.D. Cal. 1979) (no barriers to entry into motion picture market); United States v. M.P.M., Inc., 397 F. Supp. 78, 92, 94 (D. Colo. 1975) (entry barriers relatively low in ready-mix cement business).

> determine whether a particular firm exercises market power in the relevant market [footnote omitted]. As we noted in the First Interexchange Competition Order, "[m]arket share alone is not necessarily a reliable measure of competition, particularly in markets with high supply and demand elasticities.[footnote omitted]" [188]

33. In its decision in AT&T v. FCC, Case No. 99-1535, released January 23, 2001, the DC Circuit court pointed out that in the FCC's COMSAT Non-dominance Order (1998) it "went so far as to view market share as irrelevant where there was other evidence that a carrier lacked market power." In that Order, the FCC also rejected evidence of increased profitability as relevant to a determination of market power, as well as finding that COMSAT's competitive advantages due to size and superior access to certain resources did not preclude the FCC from concluding that COMSAT did not have market power in certain markets.[189] Consistent with the principles I have described, the FCC focused, instead, substantially on supply considerations and noted the importance of intermodal competition (meaning, in that case, competition between cable and satellite carriers) for proper competitive analysis.[190]

34. A firm's future competitive significance can, of course, in many cases be reasonably reflected in its market share, which is one reason why market shares are considered useful despite (and if one fully recognizes) their limitations. For example, consider the market for a conventional consumer good that requires factory capacity, labor, machinery, and raw materials with which to produce each unit. If there are, say, two firms in the market, each of which is running without substantial excess capacity, and if the production process requires significant intellectual property, expertise, or other unique resources that are possessed by these firms but not easily attainable in a

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[188] Federal Communications Commission, *In the Matter of Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier,* Order, FCC 95-427, October 12, 1995 ("*AT&T Reclassification Order"),* ¶ 68.

[189] Federal Communications Commission, *COMSAT Corporation, Petition Pursuant to Section 10(c) of the Communications Act of 1934 , as amended, for Forbearance from Dominant Carrier Regulation and for Reclassification as a Non-Dominant Carrier,* Order and Notice of Proposed Rulemaking, FCC 98-78, April 24, 1998 (*"COMSAT Reclassification Order"),* ¶ 93.

[190] *COMSAT Reclassification Order*, ¶ 76.

reasonable period of time by any third party, then each firm's market share is likely to be a good proxy for its competitive significance in the near term. If one firm attempted to raise price, the other's ability to increase its output substantially in a short period of time would be constrained by its capacity, and its relative capacity in the market would be roughly summarized by its market share. A firm with, for example, a 20% market share might have limited ability realistically to absorb sufficient quantities of demand that it would be able to defeat the profitability of the rival's price increase.

35. In contrast, in a market in which each firm's costs are characterized by relatively high fixed costs but relatively low incremental costs of providing more units or serving more customers over a large range of output, the firm's existing market share provides very little insight into its ability to expand rapidly to meet the demand created by a competitor's price increase. A firm with a 20% market share in such a market might easily and realistically be able to absorb all of the demand quickly without substantially increasing its costs. The latter cost characteristics are thought to apply to many information goods, such as software, newspapers, and music recordings, as well as, in principle, to delivery of video services over satellite.

36. Hence, the market power of a firm cannot as a general rule be summarized by its market share or, indeed, by any other single statistic or number. Rather, an economically compelling analysis of market power requires an analysis of the ability of existing firms to expand output, to provide a product or service that is viewed as a reasonable substitute for the product or service of the firm at issue by a sufficient subset of customers, and/or the ability of potential entrants to enter the market and provide a reasonable substitute in a timely fashion. Short of such a full analysis, however, some statistics can be useful, if incomplete, tools for examining market power. One such statistic is the firm's share of the *growth* in the market, or what I will call the "growth share." If, for example, a market grew by 100,000 customers (or dollars, or units of output) in a given month, and the firm captured 20,000 of those, its growth share for that month would be 20%. Growth share can be useful because it indicates the degree to which customers view the services of competitors as attractive and substitutable for the services of the firm at issue. It also

provides evidence of the extent to which the prices of the firms are considered to be competitive with one another.

37. Growth shares can be very informative in communications markets such as local telecommunications and video delivery, because these are markets recently emerging from regulation and facing competition. As I explained, in markets recently emerging from regulation, current market share may well reflect historical market shares more than future competitive significance of rivals. In such a case, growth share overcomes the backward looking characteristic of static market shares and provides a valuable measure of the vigor of competitive alternatives.

38. Another measure that can be useful in assessing competition in some markets is the "addressability" of customers by existing competitors. Addressability measures the extent to which the existing facilities of firms can serve new customers without substantial incremental cost. Addressability is a way of reflecting ease of expansion by capturing the degree to which existing facilities of competitors can be expanded or exploited more fully at low cost in order to serve more customers. In the context of a cable provider, all households passed by cable facilities would be considered addressable by the cable provider, assuming other capacity constraints or technical limitations on the cable were not binding on the provider's technical capability to serve the households. Hence, the addressability of a cable provider in a given geographic area would be measured by the percentage of households passed by its cable. For a satellite provider, all households with necessary line of sight would be addressable, assuming any incremental costs (such as antennas) specific to the customer do not outweigh the benefits of a small but significant price reduction or small but significant increase in quality.

APPENDIX C

Local & Regional Cable News and Information Channels[191]

The cable television industry provides a broad array of local and regional programming. Cable companies may produce or carry local and regional news, sports and information channels. Below is a list of some of the local and regional cable networks available on cable systems across the country.

Arizona News Channel
Location: Phoenix metro area
Programming: All news (simulcasts and replays newscasts from KTVK-TV), except for original public affairs program.

Mas! Arizona
Location: Phoenix metro area
Programming: Spanish-language network offering news, weather and sports, along with in-depth coverage of local issues and stories on local communities. Has its own on-air look, anchors, and personalities; production for the channel originates from KTVK.

Bay News 9
Location: Tampa Bay-St. Petersburg metro area
Programming: All news, including weather and traffic; county by county coverage of local news in Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas and Polk counties.

Capital News 9
Location: Albany, New York area
Programming: 24-hour local news including sports, business, health and other issues of interest to the community.

Central Florida News 13
Location: Orlando, central Florida
Programming: All news. A partnership between Bright House Networks and Tribune, the channel showcases news and reporters from *The Orlando Sentinel*.

CLTV (Chicagoland News)
Location: Chicago and surrounding suburbs
Programming: Studio-produced live newscasts, which are repeated and updated regularly;

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[191] This information was compiled from a variety of sources, including a 1999 report done by the Radio and Television News Directors Foundation entitled, "Non-Stop News: A Look at 24-Hour Local Cable News Channels;" the Association of Regional Newschannels (http://newschannels.org); and individual network websites.

several original cooking, business and entertainment shows.

CN8 The Comcast Network
Location: New England and Mid-Atlantic
Programming: News, talk, sports (high school, college and professional) and entertainment; covers national issues and their affect on viewers at the local level.

Florida's News Channel
Location: Tallahassee, Panama City, Jacksonville, West Palm Beach, Naples; Broward, Pinellas and Dade counties
Programming: Statewide 24-hour local news network providing market-specific news to Florida's largest markets, including news, talk and public affairs.

Las Vegas One
Location: Las Vegas metro area
Programming: Replays newscasts from Landmark's KLAS-TV throughout the day; produces and replays two hours of original newscasts each day, with contributions from the channel's other partner, *The Las Vegas Sun*.

Local News on Cable
Location: Norfolk, Virginia
Programming: 24-hour news channel that simulcasts and rebroadcasts WVEC-TV's news; original ½ hour newscast weekdays at 10 p.m., weekend news editions, as well as live coverage of events of local interest.

MetroChannels
Location: New York metro area
Programming: Trio of 24-hour networks devoted to the experience of living in the New York metropolitan area: MetroTV, an entertainment and lifestyle network, MetroStories, a documentary channel about New York, and Metro Traffic & Weather, a 24-hour traffic, transit and weather channel.

New England Cable News
Location: New England region
Programming: 24-[hour regional news networks providing news, weather, entertainment and sports programming to 2.8 million New England households.

New York 1 News
Location: New York City
Programming: 24-hour local news channel covering New York's five boroughs with half-hour news wheels, supplemented throughout the day with a slate of live news, sports and public affairs programs.

NY1 Noticias
Location: New York City

Programming: 24-hour Spanish-language news channel; features many of the same segments as NY1.

News 8 Austin
Location: Austin, Texas
Programming: 24-hour local news serving more than 300,000 cable households in Austin and vicinity. News 8 also offers Time Warner customers 24-hour channels for traffic and weather in English and Spanish.

News 9 San Antonio
Location: San Antonio, Texas
Programming: 24-hour local news, including regularly scheduled segments on health, sports, business, parenting, and other issues of community interest.

News 12 The Bronx
Location: Bronx, New York
Programming: 24-hour local news covering the Bronx borough of New York City. Programming includes news, weather, traffic and sports with in-depth analysis of the issues of most concern to the Bronx.

News 12-Connecticut
Location: Southwestern Connecticut
Programming: 24 hour local news service covering southwestern Connecticut. Programming includes news, weather, traffic, sports, all with a focus on Fairfield County; weekend programming includes additional programming on pets, health, education and lifestyle.

News 12 Long Island
Location: Long Island
Programming: Long Island news, weather and traffic. Programming includes a mix of financial, health, sports and other interesting segments; look at national and international news from a local perspective; weekend schedule includes lifestyle, issues and employment programming with a focus on Long Island.

News 12 New Jersey
Location: New Jersey
Programming: 24-hour local news serving northern and central New Jersey. Programming includes news, weather, traffic, business, health, crime, education, government and politics.

News 12 Westchester
Location: Westchester County, New York
Programming: 24-hour local news dedicated to serving the entire county of Westchester. Programming includes news, traffic, weather, sports, public affairs and human interest interviews, national and international news from a local perspective.

News 14 Carolina - Charlotte
Location: Charlotte, North Carolina
Programming: 24-hour local news with regularly scheduled segments on health, gardening, food and family.

News 14 Carolina - Raleigh
Location: Raleigh, North Carolina area
Programming: 24-hour local news channel; programming includes shows on health, food, gardening, pets and family.

News 24 Houston
Location: Houston, Texas
Programming: 24-hour local news with regularly scheduled features on health, food, and community events.

News Channel 3 Anytime (NC3A)
Location: Memphis, Tennessee
Programming: Simulcasts and rebroadcasts local CBS affiliate WREG's news and special programming giving viewers access to local news, weather and information 24 hours a day.

NewsChannel 5+
Location: Nashville, Tennessee
Programming: Combines time-shifted news programs from CBS affiliate WTVF, live news events, special presentations and viewer driven call-in shows. Also brings viewers gavel-to-gavel coverage of Middle Tennessee's most important court trials.

NewsChannel 8
Location: Washington, D.C. metro area
Programming: 24-hour local news, including zoned news with separate anchor teams and producers assigned to DC, Virginia and Maryland. Rebroadcasts some ABC news, e.g., ABC World News Tonight.

News Now 53
Location: Oklahoma City, Oklahoma
Programming: Includes rebroadcasts of local CBS affiliate KWTV's local newscasts in addition to some original sports programming.

News on One
Location: Omaha, Nebraska
Programming: Includes simulcasts and repeats of NBC affiliate WOWT's newscasts, with some unique special programming such as continuous election night coverage.

Newswatch 15
Location: New Orleans, Louisiana
Programming: Features simulcasts and rebroadcasts CBS affiliate WWL's newscasts.

Northwest Cable News
Location: Northwest U.S.
Programming: 24-hour news and information network serving 1.9 million viewers in Washington, Oregon, Idaho, western Montana, northern California and Alaska.

Ohio News Network
Location: Ohio
Programming: Comprehensive 24-hour news channel covering localism of towns and cities and regionalism of entire state. Programming includes news, weather, sports, politics, public safety, travel and tourism, health, business news, Ohio history segments and special events.

Pittsburgh Cable News
Location: Pittsburgh, Pennsylvania
Programming: Combines replays of NBC affiliate WPXI's newscasts with original 10 p.m. newscast, sports, lifestyles and talk shows.

R News
Location: Greater Rochester, New York area
Programming: 24-hour local news; 30 minute news wheel format with one-hour segments during primetime.

Rhode Island News Channel (WLNE)
Location: Providence, Rhode Island
Programming: Features simulcasts and rebroadcasts of local ABC affiliate WLNE's newscasts, including a special weekend edition of ABC6 news for Saturday and Sunday mornings.

San Diego NewsChannel 15
Location: San Diego, California
Programming: Includes simulcasts and rebroadcasts of local ABC affiliate KGTV's newscasts, as well as live and extended coverage of breaking news events.

Six News Now
Location: Southwest Florida
Programming: 24-hour news including weather, business, health, cooking and lifestyle programming; collaborates closely with staff of owner newspaper, *Sarasota Herald-Tribune*.

Texas Cable News
Location: Dallas, Texas
Programming: 24-hours of news, weather, sports; sources include Belo-owned WFAA (Dallas), KHOU (Houston), KENS (San Antonio), KVUE (Austin) and the *Dallas Morning News*.

WBIR-10 News 2
Location: Knoxville, Tennessee
Programming: Features simulcasts and rebroadcasts of local NBC affiliate WBIR's newscasts, including coverage of local news, weather and sports.

APPENDIX D

Public Affairs Cable Networks

The cable television industry has taken the lead in providing public affairs programming – both at the national and state levels. Beginning with C-SPAN in 1979, the cable industry has introduced gavel-to-gavel coverage of the U.S. Congress, as well as state legislatures across the country. These channels bring government into millions of homes and give Americans direct access to the decision-making process. Below are some examples of the public affairs programming offered by cable companies.[192]

1. **C-SPAN** (Cable-Satellite Public Affairs Network) is a private, non-profit public service of the cable television industry. The cable industry created C-SPAN in 1979 and C-SPAN 2 in 1986 to provide live, gavel-to-gavel coverage of the U.S. House of Representatives and the U.S. Senate respectively. In 1997, C-SPAN launched C-SPAN 3, a 24-hour digital offering, to provide more choice in public affairs television.

The California Channel is an independent, non-profit public affairs cable network, supported by California's cable television industry. Modeled after C-SPAN, the California Channel's primary mission is to provide Californians direct access to gavel-to gavel proceedings of the California Legislature, and other forums where public policy is discussed – all without editing, commentary or analysis.

Michigan Government Television, a non-profit arm of the cable industry, produces unedited coverage of Michigan's state government. Begun in 1996, MGTV offers live (as well as tape-delayed) gavel-to-gavel coverage of the House and Senate sessions and oral arguments before Michigan's Supreme Court. MGTV also covers executive branch boards, including the State Board of Education, House and Senate committees, live phone-in shows, and many government-related events.

The **New Jersey Cable Telecommunications Association** provides gavel-to-gavel coverage of the New Jersey legislature and distributes it statewide, where a majority of cable operators carry the programming, mostly on local origination channels.

The **Pennsylvania Cable Network (PCN)**, a non-profit arm of the cable industry, provides unedited live and same-day coverage of the Pennsylvania Senate and House floor proceedings. The network also televises committee hearings, press conferences, speeches and other public forums and events where the business of the state is debated, discussed and decided.

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[192] These are just a few examples of public affairs programming offered by cable systems. For additional information and examples see www.tvw.org/resources.